

PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

**General Motors Corporation - GMPTG - Bedford
105 GM Drive
Bedford, Indiana 47421**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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|---|------------------------------|
| Source Modification No.: 093-13639-00007 | |
| Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality | Issuance Date: July 19, 2002 |

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Certification
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SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary aluminum die casting facility.

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|------------------------------|---|
| Responsible Official: | Plant Manager |
| Source Address: | 105 GM Drive, Bedford, Indiana 47421 |
| Mailing Address: | 105 GM Drive, Bedford, Indiana 47421 |
| General Source Phone Number: | 812-279-7404 |
| SIC Code: | 3363 and 3365 |
| County Location: | Lawrence |
| Source Location Status: | Attainment for all criteria pollutants |
| Source Status: | Part 70 Permit Program |
| | Minor Source under PSD Rules |
| | Minor Source under Section 112 of the Clean Air Act |

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

- (a) one (1) new dry hearth furnace, identified as number 10, with a maximum heat input capacity of 50 million British thermal units per hour and a maximum melt rate of 12.5 tons of aluminum per hour, with emissions uncontrolled and exhausting to stacks DH-10-1, DH-10-2, and DH-10-3.
- (b) One (1) new dry hearth furnace, identified as number 13, with a maximum heat input capacity of 10 million British thermal units per hour and a maximum melt rate of 2.08 tons of aluminum per hour, with emissions uncontrolled and exhausting to stack DH-13-1;
- (c) One (1) new dry hearth furnace, identified as number 14, with a maximum heat input capacity of 10 million British thermal units per hour and a maximum melt rate of 2.08 tons of aluminum per hour, with emissions uncontrolled and exhausting to stack DH-14-1;
- (d) one (1) new reverberatory furnace, identified as number 18A, with a maximum heat input capacity of 7 million British thermal units per hour and a maximum melt rate of 2.0 tons of aluminum per hour, with emissions uncontrolled and exhausting to stacks 261 and 264.

Existing Units at the Source

The following emission units are already constructed and operating at the source. The Permittee has requested that this permit to construct and operate the new furnaces (as listed above) also include conditions to limit emissions from the entire plant to less than PSD major source levels (i.e. less than 250 tons per year).

Chip Processing

- (a) one (1) aluminum chip dryer constructed in 1974, referred to as CHIP-2, with a maximum capacity of 5.85 tons of aluminum per hour and a maximum heat input capacity of 6.83 million Btu per hour, with emissions controlled by a baghouse and an afterburner AB-1 and exhausting to stack 10;

Aluminum Crushing

- (b) one (1) scrap metal crusher device, referred to as CRUSH, constructed in 1974 with a maximum crushing capacity of 37.5 tons of aluminum scrap per hour, with emissions controlled by a baghouse and exhausting to stacks 13 and 13A;

Die Cast Melting

- (c) two (2) electric induction furnaces, referred to as INDUCT-21, and INDUCT-22, constructed in 1977, each with a maximum capacity of 3.3 tons of aluminum per hour, controlled by a common venturi scrubber system VS-1 and exhausting to stack 14;
- (d) three (3) electric induction furnaces, referred to as INDUCT-23, INDUCT-24, and INDUCT-25, constructed in 1981, each with a maximum capacity of 3.3 tons of aluminum per hour, controlled by a common venturi scrubber system VS-2 and exhausting to stack 15;
- (e) two (2) electric induction furnaces, referred to as INDUCT-26 and INDUCT-27, both constructed in 1981, each with a maximum capacity of 3.3 tons of aluminum per hour, controlled by a common venturi scrubber system VS-3 and exhausting to stack 16;
- (f) one reverberatory holding furnace referred to as RF-2 and as DC MELT B - #2, constructed in 1999 with a maximum capacity of 6.25 tons of metal per hour and 0.1 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 25 million Btu per hour, with emissions uncontrolled and exhausting to stack 207;
- (g) one reverberatory melting furnace referred to as RF-3 and as DC MELT A - #3, constructed in 1974 with a maximum capacity of 3.4 tons of metal per hour and 7 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 20.4 million Btu per hour, with emissions uncontrolled and exhausting to stacks 67 and 68;
- (h) one reverberatory holding furnace referred to as RF-11 and as DC MELT A - #11, constructed in 1974 with a maximum capacity of 5.1 tons of metal per hour and 7 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 20.4 million Btu per hour, with emissions uncontrolled and exhausting to stacks 55, 56, and 15;
- (i) one reverberatory melting furnace referred to as RF-12 and as DC MELT A - #12, constructed in 1996 with a maximum capacity of 10.0 tons of metal per hour and 7 pounds of inorganic flux per ton of metal and a maximum heat input capacity of 40.0 million Btu per hour, with emissions uncontrolled and exhausting to stacks 57, 58, and 17;
- (j) one reverberatory melting furnace referred to as RF-16 and as DC MELT A - #16, constructed in 1975 with a maximum capacity of 4.87 tons of metal per hour and 7 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 29.2 million Btu per hour, with emissions uncontrolled and exhausting to stacks 52, 53, and 16;

Piston Melting

- (k) one reverberatory melting furnace referred to as RF-13 and as PIST MELT - #13, constructed in 1996, with a maximum capacity of 1.08 tons of metal per hour and a maximum heat input capacity of 5.2 million Btu per hour, with emissions uncontrolled and exhausting to stack 294;
- (l) one reverberatory melting furnace referred to as RF-5 and as PIST MELT - #5, constructed in 1977 with a maximum capacity of 4.17 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 25 million Btu per hour, with emissions uncontrolled and exhausting to stacks 283 and 284;
- (m) one reverberatory melting furnace complex referred to as complex 6 and RF-6, consisting of two natural gas-fired reverberatory furnaces, constructed in 1999, with a maximum capacity of 5 tons of metal per hour and 0.1 pounds of inorganic flux per ton of metal, and with a combined maximum heat input capacity of 33 million Btu per hour, with emissions uncontrolled and exhausting to stacks 6-1, 6-3, and charge well stacks 6-2 and 6-4;
- (n) one reverberatory melting furnace referred to as RF-7 and as PIST MELT - #7, constructed in 1976 with a maximum capacity of 6.6 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 39.6 million Btu per hour, with emissions uncontrolled and exhausting to stacks 275 and 276;
- (o) one reverberatory melting furnace referred to as RF-17 and as PIST MELT - #17, constructed in 1977 with a maximum capacity of 4.3 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 25.8 million Btu per hour, with emissions uncontrolled and exhausting to stacks 263 and 260;
- (p) one reverberatory melting furnace referred to as RF-19 and as PIST MELT - #19, constructed in 1978 with a maximum capacity of 4.67 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 28 million Btu per hour, with emissions uncontrolled and exhausting to stacks 287 and 288;
- (q) one (1) natural gas-fired boiler referred to as the POWER - tool room boiler, constructed in 1966 with a maximum heat input capacity of 10.05 million Btu per hour with emissions uncontrolled and exhausting to stack 30 which has a height of 50 feet.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6; [326 IAC 8-3-2] [326 IAC 8-3-5]
- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment; [326

IAC 6-3-2]

- (c) grinding and machining operations; [326 IAC 6-3-2]
- (d) chip and crushed material storage piles; [326 IAC 6-3-2]
- (e) sniff units; [326 IAC 6-3-2]
- (f) EDM carbon etchers, tool sharpening, and abrasive cleaning; [326 IAC 6-3-2]
- (g) small sand blasters; [326 IAC 6-3-2]
- (h) refractory powder mixing station; [326 IAC 6-3-2]
- (i) clipper brick saw; [326 IAC 6-3-2]
- (j) feed hopper and conveyor for induction furnaces; [326 IAC 6-3-2]
- (k) dross presses; [326 IAC 6-3-2]
- (l) ladle weigh station; [326 IAC 6-3-2]
- (m) die cast machines and associated small holding furnaces; [326 IAC 6-3-2]
- (n) permanent mold machines and associated small holding furnaces; [326 IAC 6-3-2] and
- (o) barrel furnace. [326 IAC 6-3-2]

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22); and
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

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SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.4 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (e) In the event that the Part 70 application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:
 - (1) If the Part 70 draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Part 70 draft.
 - (2) If the Part 70 permit has gone through final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go through a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Part 70 permit at the time of issuance.
 - (3) If the Part 70 permit has gone through public notice, but has not gone through final

EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Part 70 permit, and the Title V permit will issued after EPA review.

B.5 Phase Construction Time Frame

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the IDEM may revoke this approval to construct if the:

- (a) Construction of Phase 1 (#10 dry hearth furnace) has not begun within eighteen (18) months from the effective date of this approval or if during the construction of Phase 1, work is suspended for a continuous period of one (1) year or more.
- (b) Construction of Phase 2 (#13 dry hearth furnace) has not begun within eighteen (18) months after the operation of Phase 1 or if during the construction of Phase 2, work is suspended for a continuous period of one (1) year or more.
- (c) Construction of Phase 3 (#14 dry hearth furnace) has not begun within eighteen (18) months after the operation of Phase 2 or if during the construction of Phase 3, work is suspended for a continuous period of one (1) year or more.
- (d) Construction of Phase 4 (#18A reverberatory furnace) has not begun within eighteen (18) months after the operation of Phase 3 or if during the construction of Phase 4, work is suspended for a continuous period of one (1) year or more.

The OAQ may extend such time upon satisfactory showing that an extension, formally requested by the Permittee is justified.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) when operation begins, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Records of preventive maintenance which is required by the PMPs shall be retained for a

period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP)

pursuant to 326 IAC 1-7-3.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

- (a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.12 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)]
[326 IAC 2-7-6(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.13 Compliance Response Plan - Preparation, Implementation, Records, and Reports
[326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
 - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
 - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from, or a violation of, this permit so long as the Permittee documents such response steps in accordance with this condition.

- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.14 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to

minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality,
Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
 - (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
 - (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee

may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

**C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
[326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

one (1) aluminum chip dryer constructed in 1974, referred to as CHIP-2, with a maximum capacity of 5.85 tons of aluminum per hour and a maximum heat input capacity of 6.83 million Btu per hour, with emissions controlled by a baghouse and an afterburner AB-1 and exhausting to stack 10;

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the aluminum chip dryer shall not exceed 13.39 pounds per hour when operating at a process weight rate of 5.85 tons of aluminum per hour. The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

- (a) The PM emissions from the chip dryer shall not exceed 2.28 pounds per ton of metal.
- (b) The PM₁₀ emissions from the chip dryer shall not exceed 2.28 pounds per ton of aluminum chips.
- (c) The VOC emissions from the chip dryer shall not exceed 2.0 pounds per ton of aluminum chips.

These limits are necessary in order that the source maintain minor PSD status; therefore, the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 will not apply to units constructed after 1977.

D.1.3 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the aluminum chip dryer except when otherwise specified in 40 CFR Part 63, Subpart RRR. These requirements become applicable to the aluminum chip dryer on March 24, 2003. If any changes to 40 CFR 63, Subpart RRR are made effective between the date of issuance of this permit and March 24, 2003, the Permittee shall apply for a permit modification to incorporate the detailed requirements of the rule within 30 days after the changes noticed at 67 Fed. Reg. 41125 (June 14, 2002) are made effective. Notwithstanding any condition of this permit, for the purposes of determining compliance with this permit, the applicability, compliance deadlines and requirements of 40 CFR 63, Subpart RRR will be determined based on the regulatory provisions of that Subpart as they exist on any particular day of operation, taking into account any changes that have been made to regulations. This facility is an area source under Clean Air Act Section 112. Therefore, only the area source requirements of Subpart RRR apply to this facility.

D.1.4 Secondary Aluminum Smelting NESHAP Requirements [40 CFR Part 63 (Subpart RRR)]

- (a) Pursuant to 40 CFR 63.1505(c)(2), on or after the date the initial performance test is conducted or required to be conducted, whichever date is earlier, the owner or operator of the thermal chip dryer must not discharge or cause to be discharged to the atmosphere emissions in excess of 2.50 micrograms total polychlorinated dibenzofurans (D/F) international Toxicity Equivalent (TEQ) per megagram (3.5×10^{-5} gr per ton) of feed/charge.
- (b) Pursuant to 40 CFR 63.1506(f), the owner or operator of a thermal chip dryer with emissions controlled by an afterburner must:
 - (1) Maintain the 3-hour block average operating temperature of each afterburner at or above the average temperature established during the performance test.
 - (2) Operate the afterburner in accordance with the OM&M plan.
 - (3) Operate each thermal chip dryer using only unpainted aluminum chips as the feedstock.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the chip dryer, the baghouse, the bag leak detection system, and the afterburner.

Compliance Determination Requirements

D.1.6 Control Device Operation

- (a) In order to comply with Conditions D.1.2 and D.1.4, the afterburner shall be in operation at all times when the thermal chip dryer is in operation.
- (b) In order to comply with Conditions D.1.1 and D.1.2, the baghouse shall be in operation at all times when the thermal chip dryer is in operation.

D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)]

- (a) Within 12 months after issuance of this permit, the Permittee shall perform PM, PM10, and VOC testing using methods as approved by the Commissioner, in order to demonstrate compliance with conditions D.1.1 and D.1.2. PM10 includes filterable and condensable PM10. These tests shall be repeated at least five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. During the stack test, the Permittee shall evaluate the sensitivity of the bag leak detection system and calibrate the amperage readings in order to be able to determine outlet grain loading levels.
- (b) Within 180 days after March 24, 2003, the source shall conduct a performance test to demonstrate compliance with the requirements of 40 CFR 63, Subpart RRR as listed in Condition D.1.4(a). These tests shall be repeated at least five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing, and in accordance with the following requirements.
 - (1) Prior to conducting the performance test required by 40 CFR 63, Subpart RRR, the Permittee shall prepare and submit a site-specific test plan in compliance with 40 CFR 63.7(c). Following approval of the site-specific test plan, the Permittee shall

demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected unit and report the results in the notification of compliance report. The Permittee shall conduct performance tests in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The Permittee shall use Method 23 in Appendix A to 40 CFR 60 or an alternative method approved by the Administrator to measure the concentration of D/F.

The Permittee shall notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test shall be provided at least 30 days before the observations are scheduled to take place [63.1511(a)].

- (2) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [40 CFR 63.1511(g)].

D.1.8 Secondary Aluminum Smelting NESHAP Monitoring Requirements [40 CFR Part 63 (Subpart RRR)]

- (a) The Permittee shall prepare a written Operation, Maintenance, and Monitoring Plan and shall submit the plan to the applicable permitting authority for review and approval no later than March 24, 2003. Any subsequent changes to the plan shall be submitted to the applicable permitting authority for review and approval. Pending approval of the initial or amended plan, the Permittee shall comply with the conditions of the submitted plan. The plan shall include the following information [63.1510(b)]:
 - (1) The process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each affected unit and control device.
 - (2) A monitoring schedule for each affected unit.
 - (3) Procedures for the proper operation and maintenance of each affected unit and control device used to meet the applicable emission limit in 40 CFR 63.1505.
 - (4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (A) Calibration and certification of accuracy of each monitoring device, at least once every six (6) months, according to the manufacturer's instructions; and
 - (B) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in 40 CFR 63, Subpart A.
 - (5) Procedures for monitoring process and control parameters, including procedures for annual inspections of afterburners, and if applicable, the procedures to be used

for determining feed (or throughput) weight if a measurement device is not used.

- (6) Corrective actions to be taken when process operating parameters or add-on control device parameters deviate from the value or range established in (A) above, including:
 - (A) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and
 - (B) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date corrective action was completed.
- (7) A maintenance schedule for each affected unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

The completion of the initial performance tests for the secondary aluminum processing units shall be considered to be the date of approval of the Operation, Maintenance and Monitoring Plan by IDEM, OAQ [63.1506(a)(2)].

- (b) The Permittee shall provide and maintain easily visible labels at each affected unit that identifies the applicable emission limit and means of compliance [63.1506(b)]. The labels shall include:
 - (1) The type of affected emission unit (i.e., thermal chip dryer); and
 - (2) The applicable operational standard and control method.
- (c) The Permittee shall inspect the labels for each affected unit at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible [63.1510(c)].
- (d) The Permittee must monitor the afterburner as follows:
 - (1) The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the requirements for continuous monitoring systems in 40 CFR 63, Subpart A.
 - (2) The temperature monitoring device must:
 - (i) Be installed at the exit of each afterburner's combustion zone.
 - (ii) Record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period.
 - (iii) Have a recorder response range including zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(m).
 - (iv) The reference method must be a National Institute of Standards and

Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

- (3) Conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection must include:
 - (i) Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;
 - (ii) Inspection for proper adjustment of combustion air;
 - (iii) Inspection of internal structures (e.g., baffles) to ensure structural integrity;
 - (iv) Inspection of dampers, fans, and blowers for proper operation;
 - (v) Inspection for proper sealing;
 - (vi) Inspection of motors for proper operation;
 - (vii) Inspection of combustion chamber refractory lining and clean and replace lining as necessary;
 - (viii) Inspection of afterburner shell for corrosion and/or hot spots;
 - (ix) Documentation verifying that, for the burn cycle following the inspection, the afterburner is operating properly and all necessary adjustments have been made;
 - (x) Verification that the equipment is maintained in good operating condition.
 - (xi) Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.
- (e) The Permittee shall develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the emission limit. The Permittee shall keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during startup, shutdown, or malfunction is not consistent with the procedures in the startup, shutdown, and malfunction plan. The plan shall include [63.1516(a)].
 - (1) The procedures to determine and record the cause of a malfunction and the time the malfunction began and ended; and
 - (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including the actions taken to correct the malfunction or minimize emissions.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.9 Visible Emissions Notations

Until a bag leak detection system is installed and operational in accordance with the requirements

of Condition D.1.11, and thereafter no less often than once per month, the Permittee shall comply with the following:

- (a) Visible emission notations of the chip dryer stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.1.10 Parametric Monitoring

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11, and thereafter no less often than once per month, the Permittee shall comply with the following:

The Permittee shall record the total static pressure drop across the baghouse controlling the thermal chip dryer at least once per shift when the thermal chip dryer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instruments used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.11 Broken or Failed Bag Detection

- (a) If the Permittee chooses to install and operate a continuous bag leak detection system in lieu of performing the monitoring required by Conditions D.1.9 and D.1.10, the bag leak detection system shall meet the following requirements:
 - (1) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 0.0018 grains per actual cubic foot or less.
 - (2) The bag leak detection system sensor must provide output of relative particulate

matter loadings.

- (3) The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loadings is detected over a preset level established or verified during a stack test.
 - (4) The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.
 - (5) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time.
 - (6) In no event shall the sensitivity be increased by more than 100 percent or decreased by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition.
 - (7) The bag detector must be installed downstream of the baghouse.
 - (8) Each sensor should be inspected at least once per month to remove any build-up of material that may collect on the probe or insulator.
 - (9) Monthly QA checks and visible emission observations shall be performed to ensure the monitor is operating properly. If the results of the response test or electronics drift check or visible emission observations are not favorable, the cause shall be investigated and any malfunctions corrected.
- (b) In the event that bag failure has been observed, or in the event of a bag leak detection system alarm, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions), or if safety concerns prevent immediate shutdown. If safety concerns prevent immediate shutdown, then feed to the associated process will be shut off immediately and the process shall be shutdown as soon as shutdown would be considered safe.

D.1.12 Baghouse Inspections

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11, an inspection shall be performed each calendar quarter of all bags controlling the thermal chip dryer when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. All defective bags shall be replaced.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

**D.1.13 Record Keeping Requirements [40 CFR 63, Subpart RRR] [326 IAC 2-7-5(3)]
[326 IAC 2-7-19]**

- (a) To document compliance with Condition D.1.9, until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11, the Permittee shall maintain records of visible emission notations of the chip dryer stack exhaust once per shift.
- (b) In order to document compliance with condition D.1.10, until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11, the Permittee shall maintain records of the total static pressure drop once per shift during normal operation when venting to the atmosphere.
- (c) To document compliance with Condition D.1.11, if the Permittee chooses to install and operate a continuous bag leak detection system in accordance with the requirements of Condition D.1.11 in lieu of performing the monitoring required by Conditions D.1.9 and D.1.10, then the Permittee shall maintain records of the dates and times of all bag leak detection system alarms, the cause of each alarm, and an explanation of all response steps taken. The Permittee shall also maintain records of the dates and results of the sensor inspections, response tests, electronics drift checks, monthly visible emission notations, and any response steps taken.
- (d) In order to document compliance with Condition D.1.12, until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11, the Permittee shall maintain records of the results of the inspections required under Condition D.1.12.
- (e) Pursuant to 40 CFR 63, Subpart RRR, in addition to the general records required by 40 CFR 63.10(b), the Permittee shall maintain:
 - (1) The number of total operating hours for the affected source or emission unit during each 6 month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.
 - (2) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.
 - (3) Records of any approved alternative monitoring or test procedure.
 - (4) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (i) Startup, shutdown, and malfunction plan;
 - (ii) Operation, Maintenance, and Monitoring Plan; and
 - (iii) Site-specific secondary aluminum processing unit emission plan.

The record keeping requirements pursuant to the NESHAP 40 CFR 63, Subpart RRR, become applicable to the aluminum chip dryer on March 24, 2003.

- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.14 Reporting Requirements [40 CFR 63, Subpart RRR]

- (a) Pursuant to 40 CFR 63.1515(b), the Permittee shall submit a notification of compliance status reports no more than 60 days after March 24, 2003 for the thermal chip dryer. The notification must be signed by the responsible official who must certify its accuracy. The report shall include:
- (1) All information required in 40 CFR 63.9(h). The Permittee shall provide a complete performance test report for each affected unit, including data, associated measurements, and calculations.
 - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.
 - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or each affected unit classification and operating requirements.
 - (4) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., alkaline agent injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.
 - (5) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for the capture/collection system required in 40 CFR 63.1506(c).
 - (6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems required in 40 CFR 63.1510(f).
 - (7) Approved Operation, Maintenance, and Monitoring Plan.
 - (8) Startup, shutdown, and malfunction plan.
- (b) On and after March 24, 2003, the Permittee shall submit a semi-annual report within 60 days after the end of each six (6) month period detailing all deviations from the Operation, Maintenance, and Monitoring Plan. When no deviations have occurred, the Permittee shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any following conditions occur [63.1516(b)]:
- (1) An excursion of a compliant process or operating parameter value or range.
 - (2) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan.
 - (3) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

The Permittee shall submit the results of any performance test conducted during

the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

- (4) The Permittee shall maintain files of all information, including reports and notifications, required by 40 CFR 63.10 and 40 CFR 63.1517. The Permittee shall retain each record for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent two (2) years of records shall be retained at the source. The remaining three (3) years of records may be retained off-site. The Permittee may retain records on microfilm, computer disks, magnetic tape or microfiche.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

one (1) scrap metal crusher device, referred to as CRUSH, constructed in 1974 with a maximum crushing capacity of 37.5 tons of aluminum scrap per hour, with emissions controlled by a baghouse and exhausting to stacks 13 and 13A

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the scrap metal crusher shall not exceed 41.94 pounds per hour when operating at a process weight rate of 37.5 tons of aluminum per hour. The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate greater than 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.2.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

- (a) The PM emissions from the scrap metal crusher shall not exceed 0.235 pounds per hour.
- (b) The PM10 emissions from the scrap metal crusher shall not exceed 0.235 pounds per hour.

These limits are necessary in order that the source maintain minor PSD status; therefore, the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 will not apply to units constructed after 1977.

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the scrap metal crusher, the baghouse, and the bag leak detection system.

Compliance Determination Requirements

D.2.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

Within 12 months after issuance of this permit, the Permittee shall perform PM and PM10 testing using methods as approved by the Commissioner, in order to demonstrate compliance with conditions D.2.1 and D.2.2. PM10 includes filterable and condensable PM10. This test shall be repeated at least five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. During the stack test, the Permittee shall evaluate the sensitivity of the bag leak detection system and calibrate the amperage readings in order to be able to determine outlet grain loading levels.

D.2.5 Particulate Matter (PM)

In order to comply with Conditions D.2.1 and D.2.1, the baghouse shall be in operation at all times when the scrap metal crusher is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.6 Visible Emissions Notations

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9, and thereafter no less often than once per month, the Permittee shall comply with the following:

- (a) Visible emission notations of the scrap metal crusher stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.7 Parametric Monitoring

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9, the Permittee shall comply with the following:

The Permittee shall record the total static pressure drop across the baghouse controlling the scrap metal crusher at least once per shift when the scrap metal crusher is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instruments used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.8 Baghouse Inspections

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9, an inspection shall be performed each calendar quarter of all bags controlling

the scrap metal crusher processes when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. All defective bags shall be replaced.

D.2.9 Broken or Failed Bag Detection

- (a) If the Permittee chooses to install and operate a continuous bag leak detection system in lieu of performing the monitoring required by Conditions D.2.6 and D.2.7, the bag leak detection system shall meet the following requirements:
 - (1) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 0.0018 grains per actual cubic foot or less.
 - (2) The bag leak detection system sensor must provide output of relative particulate matter loadings.
 - (3) The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loadings is detected over a preset level as established or verified during a stack test.
 - (4) The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.
 - (5) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time.
 - (6) In no event shall the sensitivity be increased by more than 100 percent or decreased by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition.
 - (7) The bag detector must be installed downstream of the baghouse.
 - (8) Each sensor should be inspected at least once per month to remove any build-up of material that may collect on the probe or insulator.
 - (9) Monthly QA checks and visible emission observations shall be performed to ensure the monitor is operating properly. If the results of the response test or electronics drift check or visible emission observations are not favorable, the cause shall be investigated and any malfunctions corrected.
- (b) In the event that bag failure has been observed or in the event of a bag leak detection system alarm, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section C- Emergency Provisions), or if safety concerns prevent immediate shutdown. If safety concerns prevent immediate shutdown, then feed to the associated process will be shut off immediately and the process shall be

shutdown as soon as shutdown would be considered safe. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.10 Record Keeping Requirements

- (a) In order to document compliance with Condition D.2.6, until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9, the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust once per shift.
- (b) In order to document compliance with condition D.2.7, until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9, the Permittee shall maintain records of the total static pressure drop once per shift during normal operation when venting to the atmosphere.
- (c) In order to document compliance with Condition D.2.8, until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9, the Permittee shall maintain records of the results of the inspections required under Condition D.2.8.
- (d) In order to document compliance with Condition D.2.9, if the Permittee chooses to install and operate a continuous bag leak detection system in accordance with the requirements of Condition D.2.9 in lieu of performing the monitoring required by Conditions D.2.6 and D.2.7, then the Permittee shall maintain records of the dates and times of all bag leak detection system alarms, the cause of each alarm, and an explanation of all response steps taken. The Permittee shall also maintain records of the dates and results of the sensor inspections, response tests, electronics drift checks, monthly visible emission notations, and any response steps taken.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Die Cast Melting

- (a) two (2) electric induction furnaces, referred to as INDUCT-21, and INDUCT-22, constructed in 1977, each with a maximum capacity of 3.3 tons of aluminum per hour, controlled by a common venturi scrubber system VS-1 and exhausting to stack 14;
- (b) three (3) electric induction furnaces, referred to as INDUCT-23, INDUCT-24, and INDUCT-25, constructed in 1981, each with a maximum capacity of 3.3 tons of aluminum per hour, controlled by a common venturi scrubber system VS-2 and exhausting to stack 15;
- (c) two (2) electric induction furnaces, referred to as INDUCT-26 and INDUCT-27, both constructed in 1981, each with a maximum capacity of 3.3 tons of aluminum per hour, controlled by a common venturi scrubber system VS-3 and exhausting to stack 16;
- (d) one reverberatory holding furnace referred to as RF-2 and as DC MELT B - #2, constructed in 1999 with a maximum capacity of 6.25 tons of metal per hour and 0.1 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 25 million Btu per hour, with emissions uncontrolled and exhausting to stack 207;
- (e) one reverberatory melting furnace referred to as RF-3 and as DC MELT A - #3, constructed in 1974 with a maximum capacity of 3.4 tons of metal per hour and 7 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 20.4 million Btu per hour, with emissions uncontrolled and exhausting to stacks 67 and 68;
- (f) one reverberatory holding furnace referred to as RF-11 and as DC MELT A - #11, constructed in 1974 with a maximum capacity of 5.1 tons of metal per hour and 7 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 20.4 million Btu per hour, with emissions uncontrolled and exhausting to stacks 55, 56, and 15;
- (g) one reverberatory melting furnace referred to as RF-12 and as DC MELT A - #12, constructed in 1996 with a maximum capacity of 10.0 tons of metal per hour and 7 pounds of inorganic flux per ton of metal and a maximum heat input capacity of 40.0 million Btu per hour, with emissions uncontrolled and exhausting to stacks 57, 58, and 17;
- (h) one reverberatory melting furnace referred to as RF-16 and as DC MELT A - #16, constructed in 1975 with a maximum capacity of 4.87 tons of metal per hour and 7 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 29.2 million Btu per hour, with emissions uncontrolled and exhausting to stacks 52, 53, and 16;
- (i) one (1) new dry hearth furnace, identified as number 10, with a maximum heat input capacity of 50 million British thermal units per hour and a maximum melt rate of 12.5 tons of aluminum per hour, with emissions uncontrolled and exhausting to stacks DH-10-1, DH-10-2, and DH-10-3.
- (j) One (1) new dry hearth furnace, identified as number 13, with a maximum heat input capacity of 10 million British thermal units per hour and a maximum melt rate of 2.08 tons of aluminum per hour, with emissions uncontrolled and exhausting to stack DH-13-1;
- (k) One (1) new dry hearth furnace, identified as number 14, with a maximum heat input capacity of 10 million British thermal units per hour and a maximum melt rate of 2.08 tons of aluminum per hour, with emissions uncontrolled and exhausting to stack DH-14-1;
- (l) one (1) new reverberatory furnace, identified as number 18A, with a maximum heat input capacity of 7 million British thermal units per hour and a maximum melt rate of 2.0 tons of aluminum per hour, with emissions uncontrolled and exhausting to stacks 261 and 264.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Facility Description [326 IAC 2-7-5(15)] (continued)

Piston Melting

- (m) one reverberatory melting furnace referred to as RF-13 and as PIST MELT - #13, constructed in 1996, with a maximum capacity of 1.08 tons of metal per hour and a maximum heat input capacity of 5.2 million Btu per hour, with emissions uncontrolled and exhausting to stack 294;
- (n) one reverberatory melting furnace referred to as RF-5 and as PIST MELT - #5, constructed in 1977 with a maximum capacity of 4.17 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 25 million Btu per hour, with emissions uncontrolled and exhausting to stacks 283 and 284;
- (o) one reverberatory melting furnace complex referred to as complex 6 and RF-6, consisting of two natural gas-fired reverberatory furnaces, constructed in 1999, with a maximum capacity of 5 tons of metal per hour and 0.1 pounds of inorganic flux per ton of metal, and with a maximum heat input capacity of 33 million Btu per hour, with emissions uncontrolled and exhausting to stacks 6-1, 6-3, and charge well stacks 6-2 and 6-4;
- (p) one reverberatory melting furnace referred to as RF-7 and as PIST MELT - #7, constructed in 1976 with a maximum capacity of 6.6 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 39.6 million Btu per hour, with emissions uncontrolled and exhausting to stacks 275 and 276;
- (q) one reverberatory melting furnace referred to as RF-17 and as PIST MELT - #17, constructed in 1977 with a maximum capacity of 4.3 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 25.8 million Btu per hour, with emissions uncontrolled and exhausting to stacks 263 and 260;
- (r) one reverberatory melting furnace referred to as RF-19 and as PIST MELT - #19, constructed in 1978 with a maximum capacity of 4.67 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 28 million Btu per hour, with emissions uncontrolled and exhausting to stacks 287 and 288.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Process Operations), the following conditions shall apply:

- (a) The particulate matter (PM) from the #10 dry hearth furnace shall not exceed 22.27 pounds per hour when operating at a process weight rate of 12.5 tons of aluminum per hour.
- (b) The particulate matter (PM) from the #13 dry hearth furnace shall not exceed 6.70 pounds per hour when operating at a process weight rate of 2.08 tons of aluminum per hour.
- (c) The particulate matter (PM) from the #14 dry hearth furnace shall not exceed 6.70 pounds per hour when operating at a process weight rate of 2.08 tons of aluminum per hour.
- (d) The particulate matter (PM) from the #18A reverberatory furnace shall not exceed 6.52 pounds per hour when operating at a process weight rate of 2.0 tons of aluminum per hour.
- (e) The particulate matter (PM) from each of the electric induction furnaces shall not exceed 9.12 pounds per hour when operating at a process weight rate of 3.3 tons of aluminum per

hour each.

- (f) The particulate matter (PM) from the #2 reverberatory furnace shall not exceed 14.0 pounds per hour when operating at a process weight rate of 6.25 tons of aluminum per hour.
- (g) The particulate matter (PM) from the #3 reverberatory furnace shall not exceed 9.31 pounds per hour when operating at a process weight rate of 3.4 tons of aluminum per hour.
- (h) The particulate matter (PM) from the #11 reverberatory furnace shall not exceed 12.21 pounds per hour when operating at a process weight rate of 5.1 tons of aluminum per hour.
- (i) The particulate matter (PM) from the #12 reverberatory furnace shall not exceed 19.18 pounds per hour when operating at a process weight rate of 10 tons of aluminum per hour.
- (j) The particulate matter (PM) from the #16 reverberatory furnace shall not exceed 11.84 pounds per hour when operating at a process weight rate of 4.87 tons of aluminum per hour.
- (k) The particulate matter (PM) from the #5 reverberatory furnace shall not exceed 10.67 pounds per hour when operating at a process weight rate of 4.17 tons of aluminum per hour.
- (l) The particulate matter (PM) from the #6C reverberatory furnace shall not exceed 12.05 pounds per hour when operating at a process weight rate of 5.0 tons of aluminum per hour.
- (m) The particulate matter (PM) from the #7 reverberatory furnace shall not exceed 14.52 pounds per hour when operating at a process weight rate of 6.6 tons of aluminum per hour.
- (n) The particulate matter (PM) from the #17 reverberatory furnace shall not exceed 10.89 pounds per hour when operating at a process weight rate of 4.3 tons of aluminum per hour.
- (o) The particulate matter (PM) from the #19 reverberatory furnace shall not exceed 11.51 pounds per hour when operating at a process weight rate of 4.67 tons of aluminum per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.3.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

The source shall comply with conditions (a), (b), (c), (d), and (j) in order to render the requirements of 326 IAC 2-2 (PSD) not applicable to the dry hearth furnaces #10, 13, and 14 and reverberatory furnace #18A, and in order for the source to maintain minor PSD status. The source shall comply with conditions (a), (d), (e), (f), (g), (h), and (i) in order to limit the potential to emit of any single HAP to less than 10 tons per year and any combination of HAPs to less than 25 tons per year, such that the source will be a minor source of HAPs.

- (a) The total amount of metal melted by all the furnaces combined shall not exceed 175,000 tons per 12 consecutive month period.
- (b) The PM emissions from each of the furnaces shall not exceed 1.78 pounds per ton of metal melted averaged over the melt cycle.
- (c) The PM10 emissions from each of the furnaces shall not exceed 1.78 pounds per ton of metal melted averaged over the melt cycle.
- (d) The amount of organic flux used in all of the furnaces combined shall not exceed 34,909 pounds per 12 consecutive month period, where 100 pounds of inorganic flux is equivalent to 1 pound of organic flux.
- (e) The HCl emissions from the use of organic flux shall not exceed 0.55 pounds per pound of organic flux used.
- (f) The HF emissions from the use of organic flux shall not exceed 0.03 pounds per pound of organic flux used.
- (g) The hexachloroethane emissions from the use of organic flux shall not exceed 0.41 pounds per pound of organic flux used.
- (h) The HCl emissions from the use of inorganic flux shall not exceed 0.005 pounds per pound of inorganic flux used.
- (i) The HF emissions from the use of inorganic flux shall not exceed 0.02 pounds per pound of inorganic flux used.
- (j) The Permittee shall not melt any post-consumer scrap materials in any of the furnaces at this source. Only in-house returns and/or in-house returns from other sources where the composition of the purchased returns have at least the same quality as the source's own in-house returns shall be melted in any of the furnaces. The other source's returns shall be specified contractually, and the quality of the returns shall be controlled contractually. Therefore, this source is not considered a secondary metal production facility and is therefore, not one of the 28 listed source categories.

These limits are necessary in order that the source maintain minor PSD status; therefore, the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 will not apply to units constructed after 1977. These conditions are also sufficient to limit emissions of HAPs to less than 10 tons per year for any single HAP and less than 25 tons per year for all HAPs combined.

D.3.3 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the furnaces except when otherwise specified in 40 CFR Part 63, Subpart RRR. These requirements become applicable to the new furnaces (dry hearth furnaces #10, 13, and 14, and reverberatory furnace #18A) upon startup. These requirements become

applicable to all other furnaces on March 24, 2003. If any changes to 40 CFR 63, Subpart RRR are made effective between the date of issuance of this permit and March 24, 2003, the Permittee shall apply for a permit modification to incorporate the detailed requirements of the rule within 30 days after the changes noticed at 67 Fed. Reg. 41125 (June 14, 2002) are made effective.

Notwithstanding any condition of this permit, for the purposes of determining compliance with this permit, the applicability, compliance deadlines and requirements of 40 CFR 63, Subpart RRR will be determined based on the regulatory provisions of that Subpart as they exist on any particular day of operation, taking into account any changes that have been made to regulations. This facility is an area source under Clean Air Act Section 112. Therefore, only the area source requirements of Subpart RRR apply to these facilities.

D.3.4 Secondary Aluminum Smelting NESHAP Requirements [40 CFR Part 63 (Subpart RRR)]

- (a) Pursuant to 40 CFR 63.1506(o), beginning upon startup, the Permittee shall operate the Group 2 furnaces (dry hearth furnaces #10, 13, and 14, and reverberatory furnace #18A) using only clean charge as the feedstock and using no reactive flux.
- (b) Pursuant to 40 CFR 63.1506(o), beginning on March 24, 2003, the Permittee shall operate the electric induction furnaces using only clean charge as the feedstock and using no reactive flux.
- (c) The Group 1 furnaces at this source (reverberatory furnaces #2, 3, 5, 6-C, 7, 11, 12, 16, 17, and 19) are subject to the requirements of this rule.
- (d) If any changes to 40 CFR 63, Subpart RRR are made effective between the date of issuance of this permit and March 24, 2003, the Permittee shall apply for a permit modification to incorporate the detailed requirements of the rule within 30 days after the changes noticed at 67 Fed. Reg. 41125 (June 14, 2002) are made effective. Notwithstanding any condition of this permit, for the purposes of determining compliance with this permit, the applicability, compliance deadlines and requirements of 40 CFR 63, Subpart RRR will be determined based on the regulatory provisions of that Subpart as they exist on any particular day of operation, taking into account any changes that have been made to regulations.

D.3.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities.

Compliance Determination Requirements

D.3.6 Testing Requirements [326 IAC 2-7-6(1),(6)]

- (a) Within 60 days after achieving maximum capacity, but no later than 180 days after startup, the Permittee shall perform PM and PM10 testing on the dry hearth furnace #10 using methods as approved by the Commissioner, in order to demonstrate compliance with condition D.3.1 and D.3.2. PM10 includes filterable and condensible PM10. This test shall be repeated at least five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Within 12 months after issuance of this permit, the Permittee shall perform PM and PM10 testing on the reverberatory furnaces #2 and #6C using methods as approved by the Commissioner, in order to demonstrate compliance with condition D.3.1 and D.3.2. PM10 includes filterable and condensible PM10. This test shall be repeated at least five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

- (c) Within 12 months after issuance of this permit, the Permittee shall cease operations of all electric induction furnaces or perform PM and PM10 testing on one of the electric induction furnaces using methods as approved by the Commissioner, in order to demonstrate compliance with condition D.3.1 and D.3.2. PM10 includes filterable and condensable PM10. This test shall be repeated at least five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.7 Record Keeping Requirements

- (a) To document compliance with Condition D.3.2, the Permittee shall keep records of the amount of metal melted in all of the furnaces combined, each month of operation.
- (b) To document compliance with Condition D.3.2, the Permittee shall keep records of the amount of organic flux used in all of the furnaces combined, each month of operation.
- (c) To document compliance with Condition D.3.2, the Permittee shall keep records of the amount of inorganic flux used in all of the furnaces combined, each month of operation.
- (d) To document compliance with Condition D.3.2(j), the Permittee shall keep records of the type of scrap used in the furnaces. The records shall be sufficient to demonstrate compliance with the requirements of D.3.2(j).
- (e) Pursuant to 40 CFR 63.1506(r), the Permittee shall record a description of the materials charged to of the Group 2 furnaces (dry hearth furnaces #10, 13, and 14, all electric induction furnaces, and reverberatory furnaces #13 and 18A), including any nonreactive, non-HAP-containing/non-HAP-generating fluxing materials or agents. For the dry hearth furnaces #10, 13, and 14 and the reverberatory furnace #18A this record keeping shall begin upon startup. This record keeping shall begin on March 24, 2003 for the electric induction furnaces and reverberatory furnace #13.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.8 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition D.3.2 shall be submitted to the address in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) Pursuant to 40 CFR 63.1506(r), beginning upon startup, the Permittee shall submit a signed certification of compliance with the applicable operational standard for charge materials in 40 CFR 63.1506(o) for each 6-month reporting period for each of the new Group 2 furnaces (dry hearth furnaces #10, 13, and 14, and reverberatory furnace 18A). Each certification must contain the information in 40 CFR 63.1515(b)(2)(v).
- (c) Pursuant to 40 CFR 63.1506(r), on and after March 24, 2003, the Permittee shall submit a signed certification of compliance with the applicable operational standard for charge materials in 40 CFR 63.1506(o) for each 6-month reporting period for each of the existing Group 2 furnaces (all electric induction furnaces and reverberatory furnace #13). Each certification must contain the information in 40 CFR 63.1515(b)(2)(v).

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

one (1) natural gas-fired boiler referred to as the POWER - tool room boiler, constructed in 1966 with a maximum heat input capacity of 10.05 million Btu per hour with emissions uncontrolled and exhausting to stack 30 which has a height of 50 feet.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate Matter (PM)

Pursuant to 326 IAC 6-2-3 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the 10.05 MMBtu per hour heat input boiler shall be limited to 0.8 pound per million Btu of heat input.

This limitation is based on the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

where C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

Pt = Pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).

Q = Total source maximum operating capacity rating in million Btu per hour of heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's operation permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBtu/hr heat input. The value 0.8 shall be used for Q greater than 1,000 MMBtu/hr heat input.

h = Stack height in feet. If a number of stacks of different heights exist, the average stack height to represent "N" stacks shall be calculated by weighing each stack height with its particulate matter emissions rate.

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6;
- (b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment;
- (c) grinding and machining operations;
- (d) chip and crushed material storage piles;
- (e) sniff units;
- (f) EDM carbon etchers, tool sharpening, and abrasive cleaning;
- (g) small sand blasters;
- (h) refractory powder mixing station;
- (i) clipper brick saw;
- (j) feed hopper and conveyor for induction furnaces;
- (k) dross presses;
- (l) ladle weigh station;
- (m) die cast machines and associated small holding furnaces;
- (n) permanent mold machines and associated small holding furnaces; and
- (o) barrel furnace.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Degreasing operations

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.5.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements

are met:

- (1) Close the cover whenever articles are not being handled in the degreaser.
- (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
- (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Process Weight Activities

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from each of the particulate emitting facilities listed in this section shall not exceed the allowable PM emission rate based on the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: General Motors Corporation - GMPTG - Bedford
Source Address: 105 GM Drive, Bedford, Indiana 47421
Mailing Address: P.O. Box 271, Bedford, Indiana 47421
Source Modification No.: 093-13639-00007

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

Part 70 Source Modification Quarterly Report

Source Name: General Motors Corporation - GMPTG - Bedford
Source Address: 105 GM Drive, Bedford, Indiana 47421
Mailing Address: P.O. Box 271, Bedford, Indiana 47421
Source Modification No.: 093-13639-00007
Facilities: All furnaces
Parameter: The amount of metal melted in all furnaces combined
Limit: 175,000 tons of metal melted in all furnaces combined, per 12 consecutive month period

YEAR: _____

| Month | Column 1 | Column 2 | Column 1 + Column 2 |
|---------|------------|--------------------|---------------------|
| | This Month | Previous 11 Months | 12 Month Total |
| Month 1 | | | |
| Month 2 | | | |
| Month 3 | | | |

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

A certification by the "responsible official" as defined by 326 IAC 2-7-1(34) is required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

Part 70 Source Modification Quarterly Report

| | |
|--------------------------|---|
| Source Name: | General Motors Corporation - GMPTG - Bedford |
| Source Address: | 105 GM Drive, Bedford, Indiana 47421 |
| Mailing Address: | P.O. Box 271, Bedford, Indiana 47421 |
| Source Modification No.: | 093-13639-00007 |
| Facilities: | All furnaces |
| Parameter: | The amount of flux used in all furnaces combined |
| Limit: | 34,909 pounds of organic flux used in all furnaces combined, per 12 consecutive month period, where 100 pounds of inorganic flux is equivalent to 1 pound of organic flux |

YEAR: _____

[illegible]

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

A certification by the “responsible official” as defined by 326 IAC 2-7-1(34) is required for this report.

Mail to: Permit Administration & Development Section
Office Of Air Quality
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

General Motors Corporation - GMPTG - Bedford
105 GM Drive
Bedford, Indiana 47421

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make
these representations on behalf of _____.
(Company Name)
4. I hereby certify that General Motors Corporation - GMPTG - Bedford, 105 GM Drive, Bedford, Indiana, 47421, has constructed the dry hearth furnace #10 in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on December 20, 2000 and as permitted pursuant to **Source Modification No. 093-13639-00007** issued on _____

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 20 _____.

My Commission expires: _____

Signature

Name (typed or printed)

Mail to: Permit Administration & Development Section
Office Of Air Quality
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

General Motors Corporation - GMPTG - Bedford
105 GM Drive
Bedford, Indiana 47421

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make
these representations on behalf of _____.
(Company Name)
4. I hereby certify that General Motors Corporation - GMPTG - Bedford, 105 GM Drive, Bedford, Indiana, 47421, has constructed the dry hearth furnace #13 in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on December 20, 2000 and as permitted pursuant to **Source Modification No. 093-13639-00007** issued on _____.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 20 _____.

My Commission expires: _____

Signature

Name (typed or printed)

Mail to: Permit Administration & Development Section
Office Of Air Quality
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

General Motors Corporation - GMPTG - Bedford
105 GM Drive
Bedford, Indiana 47421

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make
these representations on behalf of _____.
(Company Name)
4. I hereby certify that General Motors Corporation - GMPTG - Bedford, 105 GM Drive, Bedford, Indiana, 47421, has constructed the dry hearth furnace #14 in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on December 20, 2000 and as permitted pursuant to **Source Modification No. 093-13639-00007** issued on _____

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 20 _____.

My Commission expires: _____

Signature

Name (typed or printed)

Mail to: Permit Administration & Development Section
Office Of Air Quality
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

General Motors Corporation - GMPTG - Bedford
105 GM Drive
Bedford, Indiana 47421

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that General Motors Corporation - GMPTG - Bedford, 105 GM Drive, Bedford, Indiana, 47421, has constructed the reverberatory furnace #18A in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on December 20, 2000 and as permitted pursuant to **Source Modification No. 093-13639-00007** issued on _____.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 20 _____.

My Commission expires: _____

Signature

Name (typed or printed)

July 19, 2002
Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a Significant Source Modification
to a Part 70 Operating Permit

| | |
|--------------------------------------|--|
| Source Name: | General Motors Corporation - GMPTG - Bedford |
| Source Location: | 105 GM Drive, Bedford, Indiana 47421 |
| County: | Lawrence |
| SIC Code: | 3363 (aluminum die cast) and 3365 (aluminum foundry) |
| Operation Permit No.: | T093-5652-00007 |
| Operation Permit Issuance Date: | not yet issued |
| Significant Source Modification No.: | 093-13639-00007 |
| Permit Reviewer: | Nisha Sizemore |

On May 22, 2002, the Office of Air Quality (OAQ) had a notice published in the Times-Mail, Bedford, Indiana, stating that General Motors Corporation - GMPTG - Bedford had applied for a significant source modification to a Part 70 Operating Permit to operate four (4) new aluminum melt furnaces. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Kimberly Dobosenski, General Motors Corporation - Powertrain Group provided written comments on the proposed permit during the public comment period. A summary of the comments is as follows:

Comment #1

Table of Contents
In Source Summary A.4 is before A.3.

Response #1

The table of contents has been changed appropriately.

Comment #2

Section A.1.
Change as follows:

| | |
|------------------------------|---------------------------------|
| Mailing Address: | 105 GM Drive, Bedford, IN 47421 |
| General Source Phone Number: | 812-279-7404 |

Response #2

The requested changes have been made.

Comment #3

Section A.2.
Under the sub-section "Die Cast Melting", subpart (f) should state that the furnace was constructed in 1999, and not 1960 as currently stated.

Response #3

The requested change has been made in Section A.2 and D.3. There are no other applicable requirements as a result of revising the date of construction.

Comment #4

Section C.2 (Preventive Maintenance Plan)

Subsection (b) of this provision states that the Permittee shall implement the PMPs "as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit." Permits issued to other Title V sources contained a different provision which stated that the failure to implement elements of the PMP would not be considered a deviation unless such failure has caused or contributed to a deviation. We believe that the language in other Title V permits is more appropriate. If IDEM retains the current language, however, we would like clarification that a violation of an emission limit would need to occur before the facility could be considered to have a deviation from or violation of its PMP under the provision as written. In other words, the facility could only be required to report a deviation from its PMP if it also had a substantive exceedance of an emission limit and the deviation from the PMP caused or contributed to that exceedance. Absent clarification in the response to our comments, General Motors will use the above interpretation in its certifications and deviation reporting.

Subsection (d) should be revised to clarify that the records of preventive maintenance to be retained refer to the preventive maintenance that is conducted pursuant to a preventive maintenance plan, rather than other preventive maintenance the facility might conduct. We interpret the provision as being limited in this manner but it would be helpful for IDEM to clarify the language appropriately. If IDEM does not address this issue when it issues the permit, General Motors will be basing its compliance certifications and actions to comply with the permit on this interpretation.

Response #4

IDEM does not interpret this condition to mean that any failure to implement the PMP is a violation of the permit. IDEM believes the language is clear as written and therefore no change is necessary to the permit.

IDEM has revised subsection (d) to clarify that the records of preventive maintenance to be retained refer to the preventive maintenance that is conducted pursuant to a preventive maintenance plan, rather than other preventive maintenance the facility might conduct. Revisions to subsection (d) are shown below.

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (d) Records of preventive maintenance **which is required by the PMPs** shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

Comment #5

Section C.13 This provision largely reflects IDEM's new model language with the exception of the following changes which are contained in the model language but are not found in this draft permit. General Motors requests that IDEM incorporate the changes below to conform to the model language.

C.13 Compliance Response Plan - Failure to Take Response Steps [326 IAC 2-7-4] [326 IAC 2-7-5]

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from, **or a violation of**, this permit so long as the Permittee documents such response steps in accordance with this condition.

- (e) The Permittee shall record all instances when response steps are taken **pursuant to Section D**. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

Response #5

The language listed in the draft permit represented the most recent version of the "model language" for this condition. IDEM periodically revises model permit language in order to continually clarify and improve upon the permit language. However, in reviewing previous versions of the model language, IDEM has been unable to identify a version of the model language that was the same as the language proposed by the applicant as "model language."

IDEM agrees to change subsection (b) as requested because all violations of the permit are also deviations from the permit.

IDEM does not agree to change subsection (e) as requested, because the intent of the condition is to require the Permittee to record all response steps taken, not just those pursuant to Section D of the permit.

Comment #6

Section D.1.2

The chip dryer has a baghouse for particulate control and an afterburner for VOC control. From an operational standpoint, the chip dryer will not operate unless the control devices are also operating. Because the system is set-up in such a way that it may be difficult to test the uncontrolled emissions, GM requests that the requirements be changed as follows:

- (a) The PM emissions from the chip dryer shall not exceed 2.28 pounds per ton of metal.
- (b) The PM10 emissions from the chip dryer shall not exceed 2.28 pounds per ton of aluminum chips.
- (c) The VOC emissions from the chip dryer shall not exceed 2.0 pounds per ton of aluminum chips.

Response #6

Since GM cannot stack test the uncontrolled emissions to show compliance with the emission limits without the control devices operating, IDEM will need to revise the permit such that the control devices are required to be operated at all times that the chip dryer is in operation. The following revisions have been made to Conditions D.1.1, D.1.6, and D.1.7 of the permit. Compliance monitoring requirements have also

been added to Section D.1 of the permit to ensure proper operation of the baghouse. Please refer to response to comment #11 for the new compliance monitoring conditions.

Facility Description [326 IAC 2-7-5(15)]

one (1) aluminum chip dryer constructed in 1974, referred to as CHIP-2, with a maximum capacity of 5.85 tons of aluminum per hour and a maximum heat input capacity of 6.83 million Btu per hour, **with emissions controlled by a baghouse and** an afterburner AB-1 and exhausting to stack 10;

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

- (a) The ~~uncontrolled~~ PM emissions from the chip dryer shall not exceed 2.28 pounds per ton of metal.
- (b) The ~~uncontrolled~~ PM10 emissions from the chip dryer shall not exceed 2.28 pounds per ton of aluminum chips.
- (c) The ~~uncontrolled~~ VOC emissions from the chip dryer shall not exceed 2.0 pounds per ton of aluminum chips.

These limits are necessary in order that the source maintain minor PSD status; therefore, the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 will not apply to units constructed after 1977.

D.1.6 Control Device Operation

- (a) In order to comply with Conditions **D.1.2 and D.1.4**, the afterburner shall be in operation at all times when the thermal chip dryer is in operation.
- (b) **In order to comply with Conditions D.1.1 and D.1.2, the baghouse shall be in operation at all times when the thermal chip dryer is in operation.**

D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)]

- (a) Within 12 months after issuance of this permit, the Permittee shall perform PM, PM10, and VOC testing using methods as approved by the Commissioner, in order to demonstrate compliance with conditions D.1.1 and D.1.2. ~~These tests shall measure uncontrolled PM, PM10, and VOC emissions.~~ PM10 includes filterable and condensable PM10. These tests shall be repeated at least five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Comment #7

The NESHAP requirements apply to the new furnaces at the start of operation and become applicable to the existing furnaces and the chip dryer on March 24, 2003, not March 23, 2003.

Response #7

IDEM agrees that the compliance date for existing units is March 24, 2003, not March 23, 2003. That change has been made throughout the permit.

Comment #8

On June 14, 2002 revisions were proposed to 40 CFR 63 Subpart RRR under which this source would not be subject to certain requirements. If the rule is finalized as proposed these requirement will not apply to this source. Therefore, please make the following specific changes to the permit.

Section D.1.3 Please add the following:

These requirements become applicable to the aluminum chip dryer on March 24, 2003. There are currently pending EPA revisions to Subpart RRR which will affect the applicability of the rule. EPA has issued three separate proposed rules and one direct final rule all of which affect applicability. In the direct final rule, which takes effect on August 13, 2002, EPA clarifies that the applicability of the rule for new affected sources will be based on the provisions of the rule as they exist on March 23, 2003. This facility is an area source under Clean Air Act Section 112. Therefore, only the area source requirements of Subpart RRR will apply to this facility. See 67 Fed. Reg. 41118, 41125, 41136, 41138 (June 14, 2002).

Section D.1.8
Please add the following:

These requirements become applicable to the aluminum chip dryer on March 24, 2003. There are currently pending EPA revisions to Subpart RRR which will affect the applicability of the rule. 67 Fed. Reg. 41118, 41125, 41136, 41138 (June 14, 2002). The applicability of the rule on March 23, 2003 will be determined based on the regulatory provisions as they exist on that date, taking into account any changes that have been made to the regulations.

Section D.1.10(b)
This section cites the NESHAP, so please add the following:

These requirements become applicable to the aluminum chip dryer on March 24, 2003. There are currently pending EPA revisions to Subpart RRR which will affect the applicability of the rule. 67 Fed. Reg. 41118, 41125, 41136, 41138 (June 14, 2002). The applicability of the rule on March 23, 2003 will be determined based on the regulatory provisions as they exist on that date, taking into account any changes that have been made to the regulations.

Section D.3.7(e)
On June 14, 2002 revisions were proposed to 40 CFR 63 Subpart RRR under which this source would not be subject to this requirement. If the rule is finalized as proposed this requirement will not apply to this source. General Motors requests that this requirement be changed as follows:

- (e) There are currently pending EPA revisions to Subpart RRR which will affect the applicability of the rule. 67 Fed. Reg. 41118, 41125, 41136, 41138 (June 14, 2002). The applicability of the rule on March 23, 2003 will be determined based on the regulatory provisions as they exist on that date, taking into account any changes that have been made to the regulations. Pursuant to 40 CFR 63.1506(r), the Permittee shall record a description of the materials charged to the Group 2 furnaces (dry hearth furnaces #10, 13, and 14, all electric induction furnaces, and reverberatory furnaces #13 and 18A), including any nonreactive, non-HAP-containing/non-HAP-generating fluxing materials or agents. This record keeping shall begin upon startup for the dry hearth furnaces #10, 13, and 14 and the reverberatory furnace #18A. This record keeping shall begin on March 24, 2003 for the electric induction furnaces and reverberatory furnace #13.

Section D.3.8 (b)

On June 14, 2002 revisions were proposed to 40 CFR 63 Subpart RRR under which this source would not be subject to this requirement. If the rule is finalized as proposed this requirement will not apply to this source. General Motors requests that this requirement be changed as follows:

- (b) There are currently pending EPA revisions to Subpart RRR which will affect the applicability of the rule. 67 Fed. Reg. 41118, 41125, 41136, 41138 (June 14, 2002). The applicability of the rule on March 23, 2003 will be determined based on the regulatory provisions as they exist on that date, taking into account any changes that have been made to the regulations. Pursuant to 40 CFR 63.1506(r), the Permittee shall submit a signed certification of compliance with the applicable operational standard for charge materials in 40 CFR 63.1506(o) for each 6-month reporting period for each of the new Group 2 furnaces (dry hearth furnaces #10, 13, and 14, and reverberatory furnace 18A). Each certification must contain the information in 40 CFR 63.1515(b)(2)(v).

Section D.3.8(c)

On June 14, 2002 revisions were proposed to 40 CFR 63 Subpart RRR under which this source would not be subject to this requirement. If the rule is finalized as proposed this requirement will not apply to this source. General Motors requests that this requirement be changed as follows:

- (c) There are currently pending EPA revisions to Subpart RRR which will affect the applicability of the rule. 67 Fed. Reg. 41118, 41125, 41136, 41138 (June 14, 2002). The applicability of the rule on March 23, 2003 will be determined based on the regulatory provisions as they exist on that date, taking into account any changes that have been made to the regulations. Pursuant to 40 CFR 63.1506(r), on and after March 24, 2003, the Permittee shall submit a signed certification of compliance with the applicable operational standard for charge materials in 40 CFR 63.1506(o) for each 6-month reporting period for each of the existing Group 2 furnaces (all electric induction furnaces and reverberatory furnace #13). Each certification must contain the information in 40 CFR 63.1515(b)(2)(v).

Response #8

The permit conditions clearly state that the source is an area source and therefore, is only subject to the area source requirements of the MACT. The technical support document explains that there are changes proposed to the MACT that, if finalized as proposed, will affect this source's applicability status. Since the rule revisions are not yet, IDEM cannot issue a permit that is based on anticipated future revisions of the MACT. However, IDEM will include a statement in the permit allowing the Permittee to comply with the current version of the rule but also submit an application for a permit modification if the rule is changed, so that if rule revisions are finalized, the Permittee can comply with the rule as revised while waiting for a permit modification to be issued. Changes to the permit are shown below.

Condition D.1.3 has been changed as follows:

D.1.3 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the aluminum chip dryer except when otherwise specified in 40 CFR Part 63, Subpart RRR. These requirements become applicable to the aluminum chip dryer on March 23 24, 2003. **If any changes to 40 CFR 63, Subpart RRR are made effective between the date of issuance of this permit and March 24, 2003, the Permittee shall apply for a permit modification to incorporate the detailed requirements of the rule within 30 days after the changes noticed at 67 Fed. Reg. 41125 (June 14, 2002) are made effective. Notwithstanding any condition of this permit, for the purposes of determining compliance with this permit, the applicability, compliance deadlines and requirements of 40 CFR 63, Subpart RRR will be determined based on the regulatory provisions of that Subpart as they**

exist on any particular day of operation, taking into account any changes that have been made to regulations. This facility is an area source under Clean Air Act Section 112. Therefore, only the area source requirements of Subpart RRR apply to this facility.

Conditions D.3.3 and D.3.4 have been changed as follows:

D.3.3 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the furnaces except when otherwise specified in 40 CFR Part 63, Subpart RRR. These requirements **become applicable** ~~apply only~~ to the new furnaces (dry hearth furnaces #10, 13, and 14, and reverberatory furnace #18A) upon startup. These requirements become applicable to all other furnaces on March 23 24, 2003. **If any changes to 40 CFR 63, Subpart RRR are made effective between the date of issuance of this permit and March 24, 2003, the Permittee shall apply for a permit modification to incorporate the detailed requirements of the rule within 30 days after the changes noticed at 67 Fed. Reg. 41125 (June 14, 2002) are made effective. Notwithstanding any condition of this permit, for the purposes of determining compliance with this permit, the applicability, compliance deadlines and requirements of 40 CFR 63, Subpart RRR will be determined based on the regulatory provisions of that Subpart as they exist on any particular day of operation, taking into account any changes that have been made to regulations.** This facility is an area source under Clean Air Act Section 112. Therefore, only the area source requirements of Subpart RRR apply to these facilities.

D.3.4 Secondary Aluminum Smelting NESHAP Requirements [40 CFR Part 63 (Subpart RRR)]

- (a) Pursuant to 40 CFR 63.1506(o), **beginning upon startup**, the Permittee shall operate the Group 2 furnaces (dry hearth furnaces #10, 13, and 14, ~~all electric induction furnaces and~~ reverberatory furnace ~~#13~~ **18A**) using only clean charge as the feedstock and using no reactive flux.
- (b) Pursuant to 40 CFR 63.1506(o), **beginning on March 24, 2003, the Permittee shall operate the electric induction furnaces using only clean charge as the feedstock and using no reactive flux.**
- (b)(c) The Group 1 furnaces at this source (reverberatory furnaces #2, 3, 5, 6-C, 7, 11, 12, 16, 17, and 19) are subject to the requirements of this rule. ~~and shall comply with the requirements of this rule as they exist as of March 23 24, 2003 (the compliance date of the rule). The Permittee shall apply for a permit modification within 30 days after all of the revisions to 40 CFR 63, Subpart RRR which were proposed on June 14, 2002, are finalized, but no later than March 23 24, 2003, so that the detailed requirements of this rule can be added to the permit after the rule changes are finalized.~~
- (d) **If any changes to 40 CFR 63, Subpart RRR are made effective between the date of issuance of this permit and March 24, 2003, the Permittee shall apply for a permit modification to incorporate the detailed requirements of the rule within 30 days after the changes noticed at 67 Fed. Reg. 41125 (June 14, 2002) are made effective. Notwithstanding any condition of this permit, for the purposes of determining compliance with this permit, the applicability, compliance deadlines and requirements of 40 CFR 63, Subpart RRR will be determined based on the regulatory provisions of that Subpart as they exist on any particular day of operation, taking into account any changes that have been made to regulations.**

Section D.1.7(b)(2)

General Motors requests that this requirement be changed as follows:

To establish indicator monitoring the Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [40 CFR 63.1511(g)].

Response #9

Condition D.1.7(b)(2) follows the language in the rule at 40 CFR 63.1511(g). No changes have been made the permit as a result of this comment.

Comment #10

Section D.1.8(a)(5) General Motors requests that this requirement be changed as follows:

Procedures for monitoring process and control parameters, including procedures for annual inspections of afterburners **when used to achieve compliance**, and if applicable, procedures to be used for determining feed (or throughput) weight if a measurement device is not used.

Section D.1.8(a)(7) Since manufacturer's instructions are not always available, General Motors requests that this requirement be changed as follows:

- (7) A maintenance schedule for each affected unit and control device that is consistent with **good engineering practices or the** manufacturer's instructions and recommendations for routine and long-term maintenance.

Response #10

Condition D.1.8(a)(5) and (7) follows the language in the rule at 40 CFR 63.1510(5) and (7). Additionally, since GM has stated that it is not possible to stack test emissions without the afterburner in operation, there is no way for GM to show compliance with the emission limits in the permit without the afterburner in operation. Therefore, IDEM must issue the permit with a requirement that the afterburner be in operation at all times that the chip dryer is in operation. No changes have been made the permit as a result of this comment.

Comment #11

Section D.1.9 and D.2.6

If visible emissions observations are to be required, they should be imposed on a graduated basis allowing the frequency of observations to be reduced based on a history of normal readings. This emissions source has a good compliance history and there is no basis to impose per shift monitoring requirements. Under the Indiana Title V regulations, IDEM can impose that monitoring which is needed to assure compliance and no more. Monitoring on a per shift basis goes beyond what is needed to assure compliance. EPA has stated in both White Papers 1 and 2 that monitoring should not be required where it does not substantially increase the ability to assure compliance. General Motors therefore requests that this requirement be changed as follows, since this operation is well controlled and has not shown to operate with opacity above the standard:

Visible emission notations of the chip dryer stack exhaust shall be performed once per day for 30 days during normal daylight operations when exhausting to the atmosphere. If there are no abnormal notations, then visible notations of the chip dryer stack exhaust shall be performed once per week during normal daylight operations when exhausting to the atmosphere. If there are no abnormal notations after 4 weeks, then the Permittee shall perform visible emission notations of the chip dryer stack exhaust once per month during normal daylight operations when exhausting to the atmosphere. If an abnormal notation occurs the Permittee shall return to daily notations and reduce daily notations according to the schedule above. A trained employee shall record whether emissions are normal or abnormal.

As an alternate to reducing the visible emissions observations, General Motors is willing to operate a leak bag detector. When a leak is detected, the alarm will sound and the facility will initiate appropriate response steps. This alternative permit term would read as follows:

Within 90 days of permit issuance, the Permittee shall initiate operation of a leak detector on this emissions unit. When an alarm sounds, the Permittee shall investigate the cause of the alarm and initiate appropriate corrective action.

This alternative gives IDEM assurance that there are no bag leaks while minimizing the burden associated with observations of visible emissions.

Section D.2.10(a)

Additionally, General Motors requests that this requirement be changed as follows:

In order to document compliance with Condition D.2.6, the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust as required, or keep a log of all leak bag detector alarms and the actions taken to address the alarm.

Response #11

Compliance monitoring conditions such as these requirements to perform visible emission notations, are required in order to demonstrate continuous compliance with the permit requirements. Visible emission notations are used to indicate compliance with 326 IAC 5-1 and the particulate matter limits pursuant to 40 CFR 63, Subpart RRR and 326 IAC 6-3-2. Since bag failure can occur suddenly and without warning, possibly causing a violation of 326 IAC 5-1, 326 IAC 6-3-2, or 40 CFR 63, Subpart RRR, the OAQ does not believe that weekly or monthly notations would be sufficient for the Permittee to certify continuous compliance.

Further, while the nature of a facility's operation may not vary from shift to shift, the personnel at the facility does change from shift to shift. The OAQ believes that all shifts should be in tune with the work practices necessary to ensure continual compliance with permit requirements. The OAQ believes that these work practices should include an understanding and awareness of plant emissions during normal operations. This knowledge and awareness during all shifts can minimize lag time in addressing control failure.

IDEM does agree that installing and operating a bag leak detection system with an alarm would be an acceptable alternative to once per shift visible emission notations. Since GM has agreed to such an alternative, IDEM has made the following changes to the permit. Further discussions with GM revealed that they would find the following conditions acceptable as well, in lieu of conditions requiring visible emission notations.

Section D.1

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the chip dryer, **the baghouse, the bag leak detection system,** and the afterburner.

Compliance Determination Requirements

D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)]

- (a) Within 12 months after issuance of this permit, the Permittee shall perform PM, PM10, and VOC testing using methods as approved by the Commissioner, in order to demonstrate compliance with conditions D.1.1 and D.1.2. ~~These tests shall measure uncontrolled PM, PM10, and VOC emissions.~~ PM10 includes filterable and condensible PM10. These tests shall be repeated at least five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. **During the stack test, the Permittee shall evaluate the sensitivity of the bag leak detection system and calibrate the amperage readings in order to be able to determine outlet grain loading levels.**

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.9 Visible Emissions Notations

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11, the Permittee shall comply with the following:

- (a) Visible emission notations of the chip dryer stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.1.10 Parametric Monitoring

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11, and thereafter no less often than once per month, the Permittee shall comply with the following:

The Permittee shall record the total static pressure drop across the baghouse controlling the thermal chip dryer at least once per shift when the thermal chip dryer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 8.0 inches of water or a range established during the latest stack test, the

Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instruments used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.11 Broken or Failed Bag Detection

- (a) If the Permittee chooses to install and operate a continuous bag leak detection system in lieu of performing the monitoring required by Conditions D.1.9 and D.1.10, the bag leak detection system shall meet the following requirements:**
- (1) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 0.0018 grains per actual cubic foot or less.**
 - (2) The bag leak detection system sensor must provide output of relative particulate matter loadings.**
 - (3) The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loadings is detected over a preset level established or verified during a stack test.**
 - (4) The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.**
 - (5) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time.**
 - (6) In no event shall the sensitivity be increased by more than 100 percent or decreased by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition.**
 - (7) The bag detector must be installed downstream of the baghouse.**
 - (8) Each sensor should be inspected at least once per month to remove any build-up of material that may collect on the probe or insulator.**
 - (9) Monthly QA checks and visible emission observations shall be performed to ensure the monitor is operating properly. If the results of the response test or electronics drift check or visible emission observations are not favorable, the cause shall be investigated and any malfunctions corrected.**

- (b) In the event that bag failure has been observed, or in the event of a bag leak detection system alarm, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions), or if safety concerns prevent immediate shutdown. If safety concerns prevent immediate shutdown, then feed to the associated process will be shut off immediately and the process shall be shutdown as soon as shutdown would be considered safe.

D.1.12 Baghouse Inspections

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11, an inspection shall be performed each calendar quarter of all bags controlling the thermal chip dryer when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. All defective bags shall be replaced.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.4013 Record Keeping Requirements [40 CFR 63, Subpart RRR] [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- (a) To document compliance with Condition D.1.9, **until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11**, the Permittee shall maintain records of visible emission notations of the chip dryer stack exhaust once per shift.
- (b) In order to document compliance with condition D.1.10, **until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11**, the Permittee shall maintain records of the total static pressure drop once per shift during normal operation when venting to the atmosphere.
- (c) To document compliance with Condition D.1.11, if the Permittee chooses to install and operate a continuous bag leak detection system in accordance with the requirements of Condition D.1.11 in lieu of performing the monitoring required by Conditions D.1.9 and D.1.10, then the Permittee shall maintain records of the dates and times of all bag leak detection system alarms, the cause of each alarm, and an explanation of all response steps taken. The Permittee shall also maintain records of the dates and results of the sensor inspections, response tests, electronics drift checks, monthly visible emission notations, and any response steps taken.
- (d) In order to document compliance with Condition D.1.12, **until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.1.11**, the Permittee shall maintain records of the results of the inspections required under Condition D.1.12.

Section D.2

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the scrap metal crusher, ~~and~~ the baghouse, **and the bag leak detection system.**

Compliance Determination Requirements

D.2.4 Testing Requirements [326 IAC 2-7-6(1),(6)]

Within 12 months after issuance of this permit, the Permittee shall perform PM and PM10 testing using methods as approved by the Commissioner, in order to demonstrate compliance with conditions D.2.1 and D.2.2. PM10 includes filterable and condensible PM10. This test shall be repeated at least five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. **During the stack test, the Permittee shall evaluate the sensitivity of the bag leak detection system and calibrate the amperage readings in order to be able to determine outlet grain loading levels.**

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.6 Visible Emissions Notations

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9, and thereafter no less often than once per month, the Permittee shall comply with the following:

- (a) Visible emission notations of the scrap metal crusher stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.7 Parametric Monitoring

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9, the Permittee shall comply with the following:

The Permittee shall record the total static pressure drop across the baghouse controlling the scrap metal crusher at least once per shift when the scrap metal crusher is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of ~~2.0~~ **1.0** to ~~9.0~~ **8.0** inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instruments used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.8 Baghouse Inspections

Until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9, An an inspection shall be performed each calendar quarter of all bags controlling the scrap metal crusher processes when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. ~~Inspections are optional when venting indoors.~~ All defective bags shall be replaced.

D.2.9 Broken or Failed Bag Detection

~~In the event that bag failure has been observed:~~

- (a) **If the Permittee chooses to install and operate a continuous bag leak detection system in lieu of performing the monitoring required by Conditions D.2.6 and D.2.7, the bag leak detection system shall meet the following requirements:**
- (1) **The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 0.0018 grains per actual cubic foot or less.**
 - (2) **The bag leak detection system sensor must provide output of relative particulate matter loadings.**
 - (3) **The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loadings is detected over a preset level as established or verified during a stack test.**
 - (4) **The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.**
 - (5) **The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time.**
 - (6) **In no event shall the sensitivity be increased by more than 100 percent or decreased by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition.**
 - (7) **The bag detector must be installed downstream of the baghouse.**
 - (8) **Each sensor should be inspected at least once per month to remove any build-up of material that may collect on the probe or insulator.**
 - (9) **Monthly QA checks and visible emission observations shall be performed to ensure the monitor is operating properly. If the results of the response test**

or electronics drift check or visible emission observations are not favorable, the cause shall be investigated and any malfunctions corrected.

~~(a)(b)~~ ~~For multi-compartment units~~ **In the event that bag failure has been observed or in the event of a bag leak detection system alarm**, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B C- Emergency Provisions), **or if safety concerns prevent immediate shutdown. If safety concerns prevent immediate shutdown, then feed to the associated process will be shut off immediately and the process shall be shutdown as soon as shutdown would be considered safe.** Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

~~(b)~~ ~~For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.10 Record Keeping Requirements

- (a) In order to document compliance with Condition D.2.6, **until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9**, the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust once per shift.
- (b) In order to document compliance with condition D.2.7, **until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9**, the Permittee shall maintain records of the ~~inlet and outlet differential~~ **total** static pressure **drop** once per shift during normal operation when venting to the atmosphere.
- (c) In order to document compliance with Condition D.2.8, **until a bag leak detection system is installed and operational in accordance with the requirements of Condition D.2.9**, the Permittee shall maintain records of the results of the inspections required under Condition D.2.8 ~~and the dates the vents are redirected.~~
- (d) **In order to document compliance with Condition D.2.9, if the Permittee chooses to install and operate a continuous bag leak detection system in accordance with the requirements of Condition D.2.9 in lieu of performing the monitoring required by Conditions D.2.6 and D.2.7, then the Permittee shall maintain records of the dates and times of all bag leak detection system alarms, the cause of each alarm, and an explanation of all response steps taken. The Permittee shall also maintain records of the dates and results of the sensor inspections, response tests, electronics drift checks, monthly visible emission notations, and any response steps taken.**

- ~~(d)~~(e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment #12

Section D.1.10 (a)

This section cites the NESHAP, but this is not required by the NESHAP. It is required by 326 IAC 2-7-5(3). General Motors requests that this requirement be changed as follows:

- (1) To document compliance with Condition D.1.9, the Permittee shall maintain records of visible emission notations of the chip dryer stack exhaust as required, or keep a log of all leak bag detector alarms and the actions taken to address the alarm.

Response #12

Paragraph (a) does not specifically cite the NESHAP and IDEM agrees that paragraph (a) is not required by the NESHAP. IDEM has added the rule cites 326 IAC 2-7-5(3) and 326 IAC 2-7-19 to the title of the condition in order to clarify that some of the requirements are pursuant to those rules. The paragraphs that are specifically required pursuant to the NESHAP are in paragraph (d) which has been changed to specifically cite 40 CFR 63, Subpart RRR. Changes to the title of the condition and paragraph (d) of the condition are shown below. The condition has been renumbered D.1.13.

D.1.1013 Record Keeping Requirements [40 CFR 63, Subpart RRR] **[326 IAC 2-7-5(3)]**
[326 IAC 2-7-19]

- ~~(b)~~(e) **Pursuant to 40 CFR 63, Subpart RRR, in addition to the general records required by 40 CFR 63.10(b), the Permittee shall maintain:**

Comment #13

Section D.2.9(a)

On condition D.2.9, we believe the references to responses within set periods of time should be removed from the permit. In the recent changes to the CRP requirements, IDEM was clear that these types of terms are to be included in the CRP and not in the permit itself. We agree that we are required to implement reasonable response steps in a reasonable time frame but, as a matter of principle, disagree with the inclusion of specific time frames in the permit. Therefore, we request that this requirement be removed. IDEM always has the right to request to view our CRP and to request changes if it finds that our response steps are not reasonable. The permit states that the CRP should contain expected time frames for implementing response actions but due to the nature of malfunctions, time frames are "expected" but not mandatory. That is why the overriding requirement in the permit is that the Permittee's actions be reasonable. We disagree with an 8-hour period as the time frame for these units because we believe that it is not reasonable in all cases. If this permit term remains, it must be revised to include a time frame that is reasonable for all potential cases. Specifically, we believe that 24 hours is a more reasonable time frame.

Response #13

IDEM believes this condition does allow the flexibility of following the time frames for responding to broken or failed bags as listed in the CRP. This condition does not require that all response steps be implemented within 8 hours of the failure. Rather, this condition requires that response steps **according to the timetable described in the CRP**, be **initiated** (emphasis added) within 8 hours of the failure. IDEM is only requiring that the Permittee begin the process of addressing the failure within 8 hours. The actual process itself and the timetable for completing each step of the process should be followed as described in

the CRP. Additionally, after further discussions with GM staff, IDEM would like to clarify that shutting down the emission unit within 8 hours of the failure is one option that would be considered to fulfill the requirement of initiating a response step to address the failure. No changes to the permit are necessary.

Comment #14

Section D.3.2 (b-c) General Motors requests that these requirements be changed as follows:

The average PM/PM10 emissions from each of the furnaces shall not exceed 1.78 lbs/ton of metal melted over the melting cycle.

Section D.3.2 (d-i)

These requirements are not PSD requirements, but are HAPs requirements and should be under a separate heading.

Section D.3.2 (d)

Due to a requested change in the emission limit set in Section D.3.2(e), "the amount of organic flux used in all of the furnaces combined shall not exceed 34,909 pounds per 12 consecutive month period, where 100 pounds of inorganic flux is equivalent to 1 pound of organic flux."

Section D.3.2(e)

Please change the emission limit of the organic flux to 0.55 pounds HCl per pound of organic flux used.

Sections D.3.2 (f)(g)(i)

General Motors requests that these three sections be removed, since it is not possible to exceed the 25 tons of combined HAPs or 10 tons of individual HAPs if the amount of organic and inorganic flux is limited due to HCl emissions. In any event, please change the HF emission limit from 0.009 to 0.03 lb/lb flux for organic flux and from 0.004 to 0.02 lb/lb flux for inorganic flux.

Response #14

IDEM agrees to write the limit as an average over the entire melt cycle. As a result of writing the limit as an average over the entire melt cycle, the stack tests will need to be performed over the time period to complete one entire melt cycle, rather than performing three one-hour test runs.

IDEM agrees that the HCl, HF, and hexachloroethane emission limits are necessary to limit the PTE of HAPs such that the source is an area source of HAPs, rather than for the purposes of rendering PSD not applicable. IDEM has revised the condition to clarify which limits are necessary to render PSD not applicable and which limits are necessary to limit the PTE of HAPs such that the source maintains area source status.

IDEM agrees to change the emission limit for HCl from the stack test results of 0.49 lb/ton to 0.55 lb/ton in order to allow some margin of error in basing the emissions on the results of the stack test. IDEM agrees that this increase in allowable HCl emissions on a short-term basis also requires revising the production limit from 39,184 tons per year to 34,909 tons per year. These changes have been made to Condition D.3.2.

IDEM does not agree to remove sections (f), (g), and (i) which limit emissions of HF and hexachloroethane. A production limit alone is not sufficient to limit emissions of these pollutants, without a short-term limit being specified in the permit. To effectively limit the PTE of HAPs to levels less than major source levels, the permit must specify a short term emission limit as well as an annual production limit. IDEM does agree to change the HF limits as requested in order to allow some margin of error in basing the emissions on

mass balance calculations. The total allowable HF emissions are still below 1 ton per year and the source will still be considered an area source of HAPs.

All changes to Condition D.3.2 are shown below.

D.3.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

The source shall comply with conditions (a), (b), (c), (d), and (j) in order to render the requirements of 326 IAC 2-2 (PSD) not applicable to the dry hearth furnaces #10, 13, and 14 and reverberatory furnace #18A, and in order for the source to maintain minor PSD status. The source shall comply with conditions (a), (d), (e), (f), (g), (h), and (i) in order to limit the potential to emit of any single HAP to less than 10 tons per year and any combination of HAPs to less than 25 tons per year, such that the source will be a minor source of HAPs.

- (a) The total amount of metal melted by all the furnaces combined shall not exceed 175,000 tons per 12 consecutive month period.
- (b) The PM emissions from each of the furnaces shall not exceed 1.78 pounds per ton of metal melted **averaged over the melt cycle**.
- (c) The PM10 emissions from each of the furnaces shall not exceed 1.78 pounds per ton of metal melted **averaged over the melt cycle**.
- (d) The amount of organic flux used in all of the furnaces combined shall not exceed ~~39,184~~ **34,909** pounds per 12 consecutive month period, where 100 pounds of inorganic flux is equivalent to 1 pound of organic flux.
- (e) The HCl emissions from the use of organic flux shall not exceed ~~0.49~~ **0.55** pounds per pound of organic flux used.
- (f) The HF emissions from the use of organic flux shall not exceed ~~0.009~~ **0.03** pounds per pound of organic flux used.
- (g) The hexachloroethane emissions from the use of organic flux shall not exceed 0.41 pounds per pound of organic flux used.
- (h) The HCl emissions from the use of inorganic flux shall not exceed 0.005 pounds per pound of inorganic flux used.
- (i) The HF emissions from the use of inorganic flux shall not exceed ~~0.004~~ **0.02** pounds per pound of inorganic flux used.
- (j) The Permittee shall not melt any post-consumer scrap materials in any of the furnaces at this source. Only in-house returns and/or in-house returns from other sources where the composition of the purchased returns have at least the same quality as the source's own in-house returns shall be melted in any of the furnaces. The other source's returns shall be specified contractually, and the quality of the returns shall be controlled contractually. Therefore, this source is not considered a secondary metal production facility and is therefore, not one of the 28 listed source categories.

These limits are necessary in order that the source maintain minor PSD status; therefore, the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 will not apply to units constructed after 1977.

These conditions are also sufficient to limit emissions of HAPs to less than 10 tons per year for any single HAP and less than 25 tons per year for all HAPs combined.

Comment #15

Section D.3.4(a)

General Motors requests that this requirement be changed as follows:

- (a) Pursuant to 40 CFR 63.1506(o), the Permittee shall operate the Group 2 furnaces (dry hearth furnaces #10, 13, and 14, ~~all electric induction furnaces~~ and reverberatory furnace #13 18A) using only clean charge as the feedstock and using no reactive flux.

Section D.3.4(c) General Motors requests that the following be added:

- (c) The Permittee shall apply for a minor permit modification within 30 days after **all of the proposed** revisions to 40 CFR 63, Subpart RRR on June 14, 2002, are finalized, but no later than March 23, 2003, so that the detailed requirements of this rule can be added to the permit after the rule changes are finalized.

The NESHAP requirements apply to the new furnaces at the start of operation and become applicable to the existing furnaces on March 24, 2003, not March 23, 2003.

Attached is the Final Rule for the Secondary Aluminum MACT, that was published on June 14, 2002. One of the changes is in the compliance date for new or reconstructed sources - The compliance date is now March 24, 2003 or upon startup, whichever is later. You can find this on page 41120 in the second column in the last paragraph where it discusses the changes and then in the rule on page 41123 in the first paragraph.

Response #15

IDEM agrees that the NESHAP 40 CFR 63, Subpart RRR requirements applicable to the electric induction furnaces should be explained in a subsection separate from the requirements applicable to the new furnaces, since the applicability dates are different. IDEM also agrees that subsection (a) erroneously listed the reverberatory furnace as #13 rather than #18A. These changes have been made to the permit.

Three separate amendments to the NESHAP 40 CFR 63, Subpart RRR were proposed on June 14, 2002. EPA is accepting comments on these proposed amendments through August. If the amendments are finalized as they were proposed, the changes to the rule would effectively exempt all of the facilities at GM's plant, except for the chip dryer. Since the permit must reflect the current version of the NESHAP, the permit states that the furnaces will be subject to the requirements of the NESHAP. However, the permit does not specify the detailed requirements of the NESHAP with respect to the furnaces. Rather, the permit simply states that the NESHAP applies and then requires the Permittee to apply for an permit modification after the proposed rule changes are final, but prior to the compliance date of the NESHAP. IDEM agrees to clarify subsection (c) as requested.

IDEM agrees that the compliance date of the NESHAP for existing facilities is March 24, 2002.

IDEM has reviewed the direct final rule revisions which propose to change the compliance date for new units to March 24, 2003 or upon startup, whichever is later. These changes are not yet final. Assuming no adverse comments are received, the changes will be final August 13, 2002. The Permittee has indicated that it plans to start up at least one of the new furnaces in mid-July, which would be prior to the proposed rule changes becoming final. IDEM cannot issue a permit that is based on anticipated future revisions of the NESHAP. However, IDEM will include a statement in the permit allowing the Permittee to comply with

the current version of the rule but also submit an application for a permit modification if the rule is changed, so that if rule revisions are finalized, the Permittee can comply with the rule as revised while waiting for a permit modification to be issued. Changes to the permit are shown below.

All changes to Condition D.3.4 are shown below.

D.3.4 Secondary Aluminum Smelting NESHAP Requirements [40 CFR Part 63 (Subpart RRR)]

- (a) Pursuant to 40 CFR 63.1506(o), **beginning upon startup**, the Permittee shall operate the Group 2 furnaces (dry hearth furnaces #10, 13, and 14, ~~all electric induction furnaces and reverberatory furnace #13~~ **18A**) using only clean charge as the feedstock and using no reactive flux.
- (b) **Pursuant to 40 CFR 63.1506(o), beginning on March 24, 2003, the Permittee shall operate the electric induction furnaces using only clean charge as the feedstock and using no reactive flux.**
- (b)(c) The Group 1 furnaces at this source (reverberatory furnaces #2, 3, 5, 6-C, 7, 11, 12, 16, 17, and 19) are subject to the requirements of this rule. ~~and shall comply with the requirements of this rule as they exist as of March 23 24, 2003 (the compliance date of the rule). The Permittee shall apply for a permit modification within 30 days after all of the revisions to 40 CFR 63, Subpart RRR which were proposed on June 14, 2002, are finalized, but no later than March 23 24, 2003, so that the detailed requirements of this rule can be added to the permit after the rule changes are finalized.~~ **If any changes to 40 CFR 63, Subpart RRR are finalized between the date of issuance of this permit and March 24, 2003, the Permittee shall apply for a permit modification to incorporate the detailed requirements of the rule within 30 days after the changes are finalized. Notwithstanding, the applicability of the rule will be determined based on the regulatory provisions as they exist on any particular day of operation, taking into account any changes that have been made to regulations.**

Comment #16

Section D.3.6(c)

General Motors requests that this requirement be changed as follows:

- (c) Within 12 months after issuance of this permit, the Permittee shall **cease operations of all induction furnaces** or perform PM and PM10 testing on one of the electric induction furnaces using methods as approved by the Commissioner, in order to demonstrate compliance with condition D.3.1 and D.3.2. PM10 includes filterable and condensable PM10. This test shall be repeated at least five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Response #16

IDEM agrees to make the requested change.

Comment #17

General Motors requests that the following permit term be included in our permit to clarify that the permit terms in prior construction and operating permits applicable to the furnace are superseded by this permit and that any terms not incorporated into this permit are no longer applicable. We understand that, based

on a recently adopted and EPA approved regulation, IDEM is including this language in recent permits and request that it be included here as well.

Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

Response #17

This permit allows the operation of four new melt furnaces and also establishes source-wide limits on HAPs and criteria pollutants in order to limit the PTE of the source to less than major source levels for HAPs and PSD. Therefore, this permit does supersede the requirements of all previously issued permits. IDEM agrees to include the condition in the permit as proposed. The condition is now in Section A of the permit as Condition A.5.

Comment #18

Section D.4 of the permit places reporting requirements on the 10.5 MMBTU natural gas fired boiler at the facility. Since these requirements should not need to be initiated until the issuance of GMPT - Bedford's Title V permit please remove these requirements from this permit.

Response #18

IDEM agrees. The reporting requirements for the boiler have been deleted from the permit.

Record Keeping and Reporting Requirement ~~[326 IAC 2-7-5(3)] [326 IAC 2-7-19]~~

~~D.4.2 Reporting Requirements~~

~~The natural gas fired boiler certification form shall be submitted to the address listed in Section C- General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

Comment #19

Comments on TSD Appendix A (calculations)

Under the "Potential Emissions" and "Limited Emissions" tables, the sections dealing with furnace flux usage states CI usage in (lb/day). The units should actually be stated as pounds/year.

Response #19

IDEM agrees. The requested changes have been made.

July 19, 2002

**Indiana Department of Environmental Management
Office of Air Quality**

**Technical Support Document (TSD) for a Part 70 Significant Source
Modification.**

Source Background and Description

| | |
|--------------------------------------|--|
| Source Name: | General Motors Corporation - GMPTG - Bedford |
| Source Location: | 105 GM Drive, Bedford, Indiana 47421 |
| County: | Lawrence |
| SIC Code: | 3363 (aluminum die cast) and 3365 (aluminum foundry) |
| Operation Permit No.: | T093-5652-00007 |
| Operation Permit Issuance Date: | not yet issued |
| Significant Source Modification No.: | 093-13639-00007 |
| Permit Reviewer: | Nisha Sizemore |

The Office of Air Quality (OAQ) has reviewed a modification application from General Motors Corporation - GMPTG - Bedford relating to the construction of the following emission units and pollution control devices:

- (a) one (1) new dry hearth furnace, identified as number 10, with a maximum heat input capacity of 50 million British thermal units per hour and a maximum melt rate of 12.5 tons of aluminum per hour, with emissions uncontrolled and exhausting to stacks DH-10-1, DH-10-2, and DH-10-3.
- (b) One (1) new dry hearth furnace, identified as number 13, with a maximum heat input capacity of 10 million British thermal units per hour and a maximum melt rate of 2.08 tons of aluminum per hour, with emissions uncontrolled and exhausting to stack DH-13-1;
- (c) One (1) new dry hearth furnace, identified as number 14, with a maximum heat input capacity of 10 million British thermal units per hour and a maximum melt rate of 2.08 tons of aluminum per hour, with emissions uncontrolled and exhausting to stack DH-14-1;
- (d) one (1) new reverberatory furnace, identified as number 18A, with a maximum heat input capacity of 7 million British thermal units per hour and a maximum melt rate of 2.0 tons of aluminum per hour, with emissions uncontrolled and exhausting to stacks 261 and 264.

Existing Units at the Source

The following emission units are already constructed and operating at the source. The Permittee has requested that this permit to construct and operate the new furnaces (as listed above) also include conditions to limit emissions from the entire plant to less than PSD major source levels (i.e. less than 250 tons per year).

Chip Processing

- (a) one (1) aluminum chip dryer constructed in 1974, referred to as CHIP-2, with a maximum capacity of 5.85 tons of aluminum per hour and a maximum heat input capacity of 6.83 million Btu per hour, with emissions controlled by a baghouse and an afterburner AB-1 and exhausting to stack 10;

Aluminum Crushing

- (b) one (1) scrap metal crusher device, referred to as CRUSH, constructed in 1974 with a maximum crushing capacity of 37.5 tons of aluminum scrap per hour, with emissions controlled by a baghouse and exhausting to stacks 13 and 13A;

Die Cast Melting

- (c) two (2) electric induction furnaces, referred to as INDUCT-21, and INDUCT-22, constructed in 1977, each with a maximum capacity of 3.3 tons of aluminum per hour, controlled by a common venturi scrubber system VS-1 and exhausting to stack 14;
- (d) three (3) electric induction furnaces, referred to as INDUCT-23, INDUCT-24, and INDUCT-25, constructed in 1981, each with a maximum capacity of 3.3 tons of aluminum per hour, controlled by a common venturi scrubber system VS-2 and exhausting to stack 15;
- (e) two (2) electric induction furnaces, referred to as INDUCT-26 and INDUCT-27, both constructed in 1981, each with a maximum capacity of 3.3 tons of aluminum per hour, controlled by a common venturi scrubber system VS-3 and exhausting to stack 16;
- (f) one reverberatory holding furnace referred to as RF-2 and as DC MELT B - #2, constructed in 1960 with a maximum capacity of 6.25 tons of metal per hour and 0.1 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 25 million Btu per hour, with emissions uncontrolled and exhausting to stack 207;
- (g) one reverberatory melting furnace referred to as RF-3 and as DC MELT A - #3, constructed in 1974 with a maximum capacity of 3.4 tons of metal per hour and 7 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 20.4 million Btu per hour, with emissions uncontrolled and exhausting to stacks 67 and 68;
- (h) one reverberatory holding furnace referred to as RF-11 and as DC MELT A - #11, constructed in 1974 with a maximum capacity of 5.1 tons of metal per hour and 7 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 20.4 million Btu per hour, with emissions uncontrolled and exhausting to stacks 55, 56, and 15;
- (i) one reverberatory melting furnace referred to as RF-12 and as DC MELT A - #12, constructed in 1996 with a maximum capacity of 10.0 tons of metal per hour and 7 pounds of inorganic flux per ton of metal and a maximum heat input capacity of 40.0 million Btu per hour, with emissions uncontrolled and exhausting to stacks 57, 58, and 17;
- (j) one reverberatory melting furnace referred to as RF-16 and as DC MELT A - #16, constructed in 1975 with a maximum capacity of 4.87 tons of metal per hour and 7 pounds of inorganic flux per ton of metal, and a maximum heat input capacity of 29.2 million Btu per hour, with emissions uncontrolled and exhausting to stacks 52, 53, and 16;

Piston Melting

- (k) one reverberatory melting furnace referred to as RF-13 and as PIST MELT - #13, constructed in 1996, with a maximum capacity of 1.08 tons of metal per hour and a maximum heat input capacity of 5.2 million Btu per hour, with emissions uncontrolled and exhausting to stack 294;
- (l) one reverberatory melting furnace referred to as RF-5 and as PIST MELT - #5, constructed in 1977 with a maximum capacity of 4.17 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 25 million Btu per hour, with emissions uncontrolled and exhausting to stacks 283 and 284;
- (m) one reverberatory melting furnace complex referred to as complex 6 and RF-6, consisting of two natural gas-fired reverberatory furnaces, constructed in 1999, with a maximum capacity of 5 tons of metal per hour and 0.1 pounds of inorganic flux per ton of metal, and with a combined maximum heat input capacity of 33 million Btu per hour, with emissions uncontrolled and exhausting to stacks 6-1, 6-3, and charge well stacks 6-2 and 6-4;
- (n) one reverberatory melting furnace referred to as RF-7 and as PIST MELT - #7, constructed in 1976 with a maximum capacity of 6.6 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 39.6 million Btu per hour, with emissions uncontrolled and exhausting to stacks 275 and 276;
- (o) one reverberatory melting furnace referred to as RF-17 and as PIST MELT - #17, constructed in 1977 with a maximum capacity of 4.3 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 25.8 million Btu per hour, with emissions uncontrolled and exhausting to stacks 263 and 260;
- (p) one reverberatory melting furnace referred to as RF-19 and as PIST MELT - #19, constructed in 1978 with a maximum capacity of 4.67 tons of metal per hour, 9 pounds of inorganic flux per ton of metal, 2 pounds of organic flux per ton of metal, and a maximum heat input capacity of 28 million Btu per hour, with emissions uncontrolled and exhausting to stacks 287 and 288;
- (q) one (1) natural gas-fired boiler referred to as the POWER - tool room boiler, constructed in 1966 with a maximum heat input capacity of 10.05 million Btu per hour with emissions uncontrolled and exhausting to stack 30 which has a height of 50 feet.

Insignificant Activities

The following insignificant activities, as defined in 326 IAC 2-7-1(21), are also already constructed and operating at the source:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour;
- (b) a gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;
- (c) a petroleum fuel, other than gasoline, having a storage capacity less than or equal to

10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;

- (d) storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons;
- (e) vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (f) refractory storage not requiring air pollution control equipment;
- (g) application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings;
- (h) machining where an aqueous cutting coolant continuously floods the machine interface;
- (i) degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6;
- (j) Cleaners and solvents having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C or having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20 degrees C; the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months;
- (k) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment;
- (l) closed loop heating and cooling systems;
- (m) activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume;
- (n) any operation using aqueous solutions containing less than 1% by weight of VOCs, excluding HAPs;
- (o) forced and induced draft cooling tower system not regulated under a NESHAP;
- (p) replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (q) paved and unpaved roads and parking lots with public access;
- (r) asbestos abatement projects regulated by 326 IAC 14-10;
- (r) blowdown for any of the following: sight glass, boiler, compressors, pumps and cooling tower;
- (s) on-site fire and emergency response training approved by the department;
- (t) diesel generators not exceeding 1600 horsepower;
- (u) grinding and machining operations;
- (v) mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38 degrees C;

- (w) chip and crushed material storage piles;
- (x) sniff units;
- (y) EDM carbon etchers, tool sharpening, and abrasive cleaning;
- (z) vacuum pumps;
- (aa) small sand blasters;
- (bb) fire extinguisher filling;
- (cc) refractory powder mixing station;
- (dd) clipper brick saw;
- (ee) feed hopper and conveyor for induction furnaces;
- (ff) maintenance paint spray and mold ladle coating booths;
- (gg) dross presses;
- (hh) ladle weigh station;
- (ii) die cast machines and associated small holding furnaces;
- (jj) permanent mold machines and associated small holding furnaces;
- (kk) barrel furnace;
- (ll) wastewater treatment lime bin; and
- (mm) wastewater treatment 1500 gallon AST HCl.

History

On December 20, 2000, General Motors Corporation - GMPTG - Bedford (GM) submitted an application to the OAQ requesting to add three additional dry hearth furnaces to their existing plant. On April 3, 2002, GM submitted an amendment to their application. The amendment included a proposal to install a fourth furnace. An interim permit application to construct three of the furnaces was also received on December 20, 2000. The interim permit to construct was approved and issued on January 16, 2001.

General Motors Corporation - GMPTG - Bedford submitted an application for a Part 70 permit on April 1, 1996. The Part 70 permit application is currently under review by the OAQ.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

| Stack ID | Operation | Height (feet) | Diameter (inches) | Flow Rate (acfm) | Temperature (°F) |
|--------------------|----------------------------|---------------|-------------------|------------------|------------------|
| DH-10-1 | #10 dry hearth furnace | 65 | 72 | 48,000 | 800 |
| DH-10-2 | #10 dry hearth furnace | 40 | 48 | 40,000 | 400 |
| DH-10-3 | #10 dry hearth furnace | 40 | 48 | 40,000 | 400 |
| DH-13-1 | #13 dry hearth furnace | 40 | 36 | 8,799 | 800 |
| DH-14-1 | #14 dry hearth furnace | 40 | 36 | 8,799 | 800 |
| existing stack 261 | #18A reverberatory furnace | 65 | 27 | 6,800 | 800 |
| existing stack 264 | #18A reverberatory furnace | 40 | 48 | 40,000 | 400 |

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 20, 2000. Additional information was received on March 20, 2002, March 28, 2002, April 23, 2002, April 30, 2002, and May 1, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (18 pages).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls of the new emission units. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

| Pollutant | Potential To Emit from new units only (tons/year) | Potential To Emit from entire plant (tons/year) |
|-----------------|---|---|
| PM | 145.48 | 893.66 |
| PM-10 | 145.48 | 893.66 |
| SO ₂ | 0.20 | 0.99 |
| VOC | 2.89 | 142.75 |
| CO | 44.15 | 141.83 |
| NO _x | 52.56 | 168.84 |

| HAP's | Potential To Emit from new units only (tons/year) | Potential To Emit from entire plant (tons/year) |
|------------------|---|---|
| HCl | 0 | 20.43 |
| HF | 0 | 2.94 |
| hexachloroethane | 0 | 14.35 |
| lead | 0.0001686 | 0.0008443 |
| benzene | 0.0007082 | 0.003546 |
| dichlorobenzene | 0.0004047 | 0.002026 |
| formaldehyde | 0.02529 | 0.1266 |
| hexane | 0.6071 | 3.04 |
| toluene | 0.001147 | 0.005741 |
| cadmium | 0.0003710 | 0.001857 |
| chromium | 0.0004722 | 0.002364 |
| manganese | 0.0001282 | 0.0006417 |
| nickel | 0.0007082 | 0.003546 |
| TOTAL | 0.6364981 | 40.44 |

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being permitted pursuant to 326 IAC 2-7-10.5(f)(4) because the modification has the potential to emit greater than 25 tons per year of PM10 and NOx.

County Attainment Status

The source is located in Lawrence County.

| Pollutant | Status |
|-----------------|------------|
| PM-10 | attainment |
| SO ₂ | attainment |
| NO ₂ | attainment |
| Ozone | attainment |
| CO | attainment |
| Lead | attainment |

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Lawrence County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for

Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (b) Lawrence County has been classified as attainment or unclassifiable for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

| Pollutant | Emissions (tons/year) |
|-----------------|-----------------------|
| PM | 295.13 |
| PM-10 | 271.93 |
| SO ₂ | 0.865 |
| VOC | 4.042 |
| CO | 52.62 |
| NOx | 185.05 |

- (a) Prior to the issuance of this permit, this existing source was permitted as a major stationary source because an attainment regulated pollutant had the potential to emit at a rate of 250 tons per year or more, and the source is not one of the 28 listed source categories. However, the source is accepting a source-wide melt limit as part of this permit, in order to limit the source-wide potential to emit to minor source levels (less than 250 tons per year), even after the installation of the four new furnaces.
- (b) The emissions in the table above are taken from the TSD of construction permit number 093-8868, issued on February 16, 1999, and the TSD of source modification number 093-10768, issued on May 3, 1999. The source-wide emissions after accepting the source-wide melt limit are based upon emission calculations shown in Appendix A of this document.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

| | Limited Potential to Emit of All Significant Facilities (tons/year) | | | | | | |
|----------------------|---|--------|-----------------|-------|--------|-----------------|---|
| Process/facility | PM | PM-10 | SO ₂ | VOC | CO | NO _x | HAPs |
| scrap metal crusher | 1.03 | 1.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Chip dryer | 58.42 | 58.42 | 0.02 | 51.41 | 2.51 | 2.99 | HAPs from dryer natural gas combustion are included below with furnace HAPs |
| all furnaces | 155.75 | 155.75 | 0.97 | 26.38 | 135.62 | 161.45 | 20.91 |
| Maintenance painting | 0.0 | 0.0 | 0.0 | 2.74 | 0.0 | 0.0 | Less than 1 |
| tool room boiler | 0.3 | 0.3 | 0.00 | 0.2 | 3.7 | 4.4 | 0.083 |
| Total Emissions | 215.5 | 215.5 | 0.99 | 80.73 | 141.83 | 168.8 | Less than 21.99 |

This modification is not major because the Permittee is accepting a source-wide melt limit as part of this permit, in order to limit source-wide emissions to minor source levels, even after the installation of the four new furnaces. The Permittee has chosen to limit emissions to the above listed levels, rather than limiting emissions to just below 250 tons per year. The Permittee wants the flexibility to add new insignificant units without the need to re-adjust limits on other facilities to stay a minor PSD source. Calculations are shown in Appendix A.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification. The tool room boiler is not subject to the requirements of the New Source Performance Standard, (326 IAC 12, and 40 CFR 60.40c, Subpart Dc), because it was constructed prior to June 9, 1989 and has not been modified since that date.
- (b) The parts washers are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart T, because the solvents used do not contain any of the following halogenated solvents in concentrations greater than five percent by weight: methylene chloride, 1,1,1-trichloroethane, trichloroethylene, perchloroethylene, carbon tetrachloride, or chloroform.
- (c) This source has potential uncontrolled HCl emissions greater than 10 tons per year. The HCl emissions are generated from the use of flux materials. In order to limit HCl emissions to less than 10 tons per year, the source has requested a limit on the amount of flux used at the source. With this limit, emissions of any single HAP will be less than 10 tons per year and emissions of all HAPs combined will be less than 25 tons per year. The specific flux usage limit is as follows:

The amount of organic flux used shall not exceed 39,184 pounds per year, where one hundred (100) pounds of salt flux usage is equivalent to one (1) pound of organic flux usage. This usage limit is equivalent to HCl emissions of 9.6 tons per year from flux

usage. Another 0.3 tons per year of HCl is emitted elsewhere in the plant. Therefore, the total HCl emissions from this source are limited to less than 10 tons per year.

This source is not a major source of HAPs; however, the new furnaces are subject to the requirements of the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 63, Subpart RRR), because this rule includes provisions for area sources as well as major sources of HAPs. Some other existing facilities at this source are also subject to the requirements of the NESHAP 40 CFR 63, Subpart RRR.

NESHAP Requirements for New Furnaces

The new furnaces are considered Group 2 furnaces under the requirements of Subpart RRR because these furnaces melt only clean charge as defined in 40 CFR 63.1503 and perform no fluxing. The limits and conditions of Subpart RRR will apply to the new furnaces upon startup.

General Provisions

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the new furnaces except when otherwise specified in 40 CFR 63 Subpart RRR.

Operating Requirements

Pursuant to 40 CFR 63.1506(o), the Permittee shall operate each of the new furnaces identified as #10 dry hearth furnace, #18 reverb furnace, and the two (2) small dry hearth furnaces #13 and 14, using only clean charge as the feedstock and using no reactive flux.

Record Keeping and Reporting Requirements

Pursuant to 40 CFR 63.1510(r), the Permittee shall record a description of the materials charged to each of these furnaces, including any nonreactive, non-HAP-containing/non-HAP-generating fluxing materials or agents. The Permittee shall also submit a certification of compliance with the applicable operational standard for charge materials in 40 CFR 63.1506(o) for each 6-month reporting period. Each certification must contain the information in 40 CFR 63.1516(b)(2)(v).

Requirements for Existing Facilities

Thermal Chip Dryer

General Provisions

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the thermal chip dryer except when otherwise specified in 40 CFR 63 Subpart RRR.

40 CFR 63, Subpart RRR Requirements

- (a) On or after the date the initial performance test is conducted or required to be conducted, whichever date is earlier, the owner or operator of the thermal chip dryer must not discharge or cause to be discharged to the atmosphere emissions in excess of 2.50 micrograms total polychlorinated dibenzofurans (D/F) international Toxicity Equivalent (TEQ) per megagram (3.5×10^{-5} gr per ton) of

feed/charge.

- (b) The owner or operator of a thermal chip dryer with emissions controlled by an afterburner must:
 - (1) Maintain the 3-hour block average operating temperature of each afterburner at or above the average temperature established during the performance test.
 - (2) Operate the afterburner in accordance with the OM&M plan.
 - (3) Operate the thermal chip dryer using only unpainted aluminum chips as the feedstock.
- (c) The Permittee shall prepare a written Operation, Maintenance, and Monitoring Plan and shall submit the plan to the applicable permitting authority for review and approval. Any subsequent changes to the plan shall be submitted to the applicable permitting authority for review and approval. Pending approval of the initial or amended plan, the Permittee shall comply with the conditions of the submitted plan. The plan shall include the following information [63.1510(b)]:
 - (1) The process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each affected unit and control device.
 - (2) A monitoring schedule for each affected unit.
 - (3) Procedures for the proper operation and maintenance of each affected unit and control device used to meet the applicable emission limit in 40 CFR 63.1505.
 - (4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (A) Calibration and certification of accuracy of each monitoring device, at least once every six (6) months, according to the manufacturer's instructions; and
 - (B) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in 40 CFR 63, Subpart A.
 - (5) Procedures for monitoring process and control parameters, including procedures for annual inspections of afterburners, and if applicable, the procedures to be used for determining feed (or throughput) weight if a measurement device is not used.
 - (6) Corrective actions to be taken when process operating parameters or add-on control device parameters deviate from the value or range established in (A) above, including:
 - (A) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and

- (B) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date corrective action was completed.
- (7) A maintenance schedule for each affected unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

The completion of the initial performance tests for the secondary aluminum processing units shall be considered to be the date of approval of the Operation, Maintenance and Monitoring Plan by IDEM, OAQ [63.1506(a)(2)].

- (d) The Permittee shall provide and maintain easily visible labels at each affected unit that identifies the applicable emission limit and means of compliance [63.1506(b)]. The labels shall include:
 - (1) The type of affected emission unit (i.e., thermal chip dryer); and
 - (2) The applicable operational standard and control method.
- (e) The Permittee shall inspect the labels for each affected unit at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible [63.1510(c)].
- (f) The Permittee must monitor the afterburner as follows:
 - (1) The Permittee must install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the requirements for continuous monitoring systems in 40 CFR 63, Subpart A.
 - (2) The temperature monitoring device must:
 - (i) Be installed at the exit of each afterburner's combustion zone.
 - (ii) Record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period.
 - (iii) Have a recorder response range including zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(m).
 - (iv) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.
 - (3) Conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection must include:
 - (i) Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;

- (ii) Inspection for proper adjustment of combustion air;
 - (iii) Inspection of internal structures (e.g., baffles) to ensure structural integrity;
 - (iv) Inspection of dampers, fans, and blowers for proper operation;
 - (v) Inspection for proper sealing;
 - (vi) Inspection of motors for proper operation;
 - (vii) Inspection of combustion chamber refractory lining and clean and replace lining as necessary;
 - (viii) Inspection of afterburner shell for corrosion and/or hot spots;
 - (ix) Documentation verifying that, for the burn cycle following the inspection, the afterburner is operating properly and all necessary adjustments have been made;
 - (x) Verification that the equipment is maintained in good operating condition.
 - (xi) Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.
- (g) Prior to conducting the performance test required by 40 CFR 63, Subpart RRR, the Permittee shall prepare and submit a site-specific test plan in compliance with 40 CFR 63.7(c). Following approval of the site-specific test plan, the Permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected unit and report the results in the notification of compliance report. The Permittee shall conduct performance tests in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The Permittee shall use Method 23 in Appendix A to 40 CFR 60 or an alternative method approved by the Administrator to measure the concentration of D/F.
- The Permittee shall notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test shall be provided at least 30 days before the observations are scheduled to take place [63.1511(a)].
- (h) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [40 CFR 63.1511(g)].
- (i) Pursuant to 40 CFR 63.1515(b), the Permittee shall submit a notification of compliance status reports no more than 60 days after March 24, 2003 for the thermal chip dryer. The notification must be signed by the responsible official who

must certify its accuracy. The report shall include:

- (1) All information required in 40 CFR 63.9(h). The Permittee shall provide a complete performance test report for each affected unit, including data, associated measurements, and calculations.
 - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.
 - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or each affected unit classification and operating requirements.
 - (4) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., alkaline agent injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.
 - (5) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for the capture/collection system required in 40 CFR 63.1506(c).
 - (6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems required in 40 CFR 63.1510(f).
 - (7) Approved Operation, Maintenance, and Monitoring Plan.
 - (8) Startup, shutdown, and malfunction plan.
- (j) The Permittee shall develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the emission limit. The Permittee shall keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during startup, shutdown, or malfunction is not consistent with the procedures in the startup, shutdown, and malfunction plan. The plan shall include [63.1516(a)].
- (1) The procedures to determine and record the cause of a malfunction and the time the malfunction began and ended; and
 - (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including the actions taken to correct the malfunction or minimize emissions.
- (k) The Permittee shall submit a semi-annual report within 60 days after the end of each six (6) month period detailing all deviations from the Operation, Maintenance, and Monitoring Plan. When no deviations have occurred, the Permittee shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any following conditions occur [63.1516(b)]:
- (1) An excursion of a compliant process or operating parameter value or range.

- (2) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan.
- (3) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

The Permittee shall submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

- (l) The Permittee shall maintain files of all information, including reports and notifications, required by 40 CFR 63.10 and 40 CFR 63.1517. The Permittee shall retain each record for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent two (2) years of records shall be retained at the source. The remaining three (3) years of records may be retained off-site. The Permittee may retain records on microfilm, computer disks, magnetic tape or microfiche.

In addition to the general records required by 40 CFR 60.10(b), the Permittee shall maintain:

- (1) The number of total operating hours for the affected source or emission unit during each 6 month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.
- (2) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.
- (3) Records of any approved alternative monitoring or test procedure.
- (4) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (i) Startup, shutdown, and malfunction plan;
 - (ii) Operation, Maintenance, and Monitoring Plan; and
 - (iii) Site-specific secondary aluminum processing unit emission plan.

Scrap Shredder

There are no requirements under the NESHAP 40 CFR 63, Subpart RRR for shredders for area sources.

**Existing Group 2 Furnaces (all electric
induction furnaces and reverberatory furnace
#13)**

General Provisions

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326

IAC 20-1-1, apply to the existing Group 2 furnaces (all electric induction furnaces and reverberatory furnace #13) except when otherwise specified in 40 CFR 63 Subpart RRR.

40 CFR 63, Subpart RRR Requirements

Pursuant to 40 CFR 63.1506(o), the Permittee shall operate these furnaces using only clean charge as the feedstock and using no reactive flux.

Pursuant to 40 CFR 63.1510(r), the Permittee shall record a description of the materials charged to each of these furnaces, including any nonreactive, non-HAP-containing/non-HAP-generating fluxing materials or agents. The Permittee shall also submit a certification of compliance with the applicable operational standard for charge materials in 40 CFR 63.1506(o) for each 6-month reporting period. Each certification must contain the information in 40 CFR 63.1516(b)(2)(v).

Existing Group 1 Furnaces (reverberatory furnaces #2, 3, 5, 6-C, 7, 11, 12, 16, 17, and 19)

General Provisions

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the existing Group 1 furnaces (reverberatory furnaces #2, 3, 5, 6-C, 7, 11, 12, 16, 17, and 19) except when otherwise specified in 40 CFR 63 Subpart RRR.

40 CFR 63, Subpart RRR Requirements

The requirements of the NESHAP 40 CFR 63, Subpart RRR apply to these furnaces. Pursuant to the current version of the rule, these furnaces are required to comply with all the emission limits, operating standards, monitoring, testing, record keeping, and reporting requirements as Group 1 furnaces located at secondary smelting plants. The compliance date of the rule is March 23, 2003. EPA and the American Foundrymen's Society recently entered into a settlement agreement regarding the requirements of this rule as it applies to Group 1 furnaces at foundries and die cast facilities. EPA has agreed to propose changes to the NESHAP by May 10, 2002. These changes, as described in the settlement agreement, would only require this source to keep records documenting that the Group 1 furnaces use only clean charge. EPA also proposes to expand the definition of "clean charge" in the proposed upcoming rule changes.

As a result of these expected changes, the detailed requirements of the NESHAP as currently applicable to the existing Group 1 furnaces at this source, will not be spelled out in detail in this permit. Rather, the permit will state that the existing Group 1 furnaces at this source are subject to the requirements of the NESHAP 40 CFR 63, Subpart RRR and will require the source to comply with those requirements as they exist as of the compliance date of the rule (March 23, 2003). The permit will also include a condition requiring the Permittee to apply for a Permit Modification within 30 days after the rule changes are final but no later than March 23, 2003, so that the detailed requirements of the NESHAP 40 CFR 63, Subpart RRR as they will apply to the Group 1 furnaces, can be added to the permit.

(c) 40 CFR 64 (Compliance Assurance Monitoring)

In order for this rule to apply, a specific emissions unit must meet three criteria for a given pollutant: 1) the unit is subject to an emission limitation or standard for the applicable regulated air pollutant, 2) the unit uses a control device to achieve compliance with any such emission limitation or standard, and, 3) the unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal or greater than 100 percent of the amount required for a source to be classified as a major source.

For this source, the new furnaces will be uncontrolled and therefore, are not subject to the requirements of CAM. Additionally, none of the facilities at this plant have emissions before controls in excess of major source thresholds. Therefore, none of the facilities at this plant are subject to the requirements of 40 CFR 64.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

Pursuant to this rule the particulate matter (PM) from the facilities having the potential to emit particulate matter shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

| Limits pursuant to 326 IAC 6-3-2 (Process Operations) | | | |
|---|---------------------------------------|--|--|
| Process/facility | Maximum Process Weight Rate (tons/hr) | Allowable PM Emissions (pounds per hour) | Allowable PM Emissions (tons per year) |
| #10 dry hearth furnace | 12.5 | 22.27 | 97.54 |
| #13 dry hearth furnace | 2.08 | 6.70 | 29.33 |
| #14 dry hearth furnace | 2.08 | 6.70 | 29.33 |
| #18A reverb furnace | 2 | 6.52 | 28.57 |
| chip dryer | 5.85 | 13.39 | 58.65 |

| Limits pursuant to 326 IAC 6-3-2 (Process Operations) | | | |
|---|---------------------------------------|--|--|
| Process/facility | Maximum Process Weight Rate (tons/hr) | Allowable PM Emissions (pounds per hour) | Allowable PM Emissions (tons per year) |
| scrap metal crusher | 37.5 | 41.94 | 183.71 |
| electric induction furnace INDUCT-21 | 3.3 | 9.12 | 39.96 |
| electric induction furnace INDUCT-22 | 3.3 | 9.12 | 39.96 |
| electric induction furnace INDUCT-23 | 3.3 | 9.12 | 39.96 |
| electric induction furnace INDUCT-24 | 3.3 | 9.12 | 39.96 |
| electric induction furnace INDUCT-26 | 3.3 | 9.12 | 39.96 |
| electric induction furnace INDUCT-27 | 3.3 | 9.12 | 39.96 |
| RF-2 reverb furnace, DC MELT B - #2 | 6.25 | 14.00 | 61.31 |
| RF-3 reverb furnace, DC MELT A - #3 | 3.4 | 9.31 | 40.77 |
| RF-11 reverb furnace, DC MELT A - #11 | 5.1 | 12.21 | 53.50 |
| RF-12 reverb furnace, DC MELT A - #12 | 10 | 19.18 | 84.00 |
| RF-16 reverb furnace, DC MELT A - #16 | 4.87 | 11.84 | 51.87 |
| RF-5 reverb furnace, PIST MELT- #5 | 4.17 | 10.67 | 46.75 |
| RF-6 reverb furnace, PIST MELT- #6C | 5.0 | 12.05 | 52.79 |
| RF-7 reverb furnace, PIST MELT- #7 | 6.6 | 14.52 | 65.38 |

| Limits pursuant to 326 IAC 6-3-2 (Process Operations) | | | |
|---|---------------------------------------|--|--|
| Process/facility | Maximum Process Weight Rate (tons/hr) | Allowable PM Emissions (pounds per hour) | Allowable PM Emissions (tons per year) |
| RF-13 reverb furnace, PIST MELT-#13 | 1.08 | 4.32 | 18.91 |
| RF-17 reverb furnace, PIST MELT-#17 | 4.3 | 10.89 | 47.72 |
| RF-19 reverb furnace, PIST MELT-#19 | 4.67 | 11.51 | 50.43 |

The baghouse for the scrap metal crusher shall be in operation at all times the scrap metal crusher is in operation, in order to comply with the process weight rate limits. Based on calculations shown in Appendix A, the facilities can comply with these limits.

These limits are determined by use of the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The existing units were already subject to the requirements of this rule even prior to the installation of these proposed new furnaces; however, since not all of the previous permits specifically listed the requirements of this rule, IDEM is listing the requirements in this permit.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source has agreed to accept federally enforceable permit limitations restricting the melting operation such that only aluminum ingot and in-house run-around scrap can be melted in any of the furnaces (no post-consumer scrap). Therefore, this source is not considered a secondary metal production facility and is therefore, not one of the 28 listed source categories.

The following limits shall apply in order that the source maintain minor PSD status, even after the installation of these new furnaces.

- The total amount of metal melted by the entire source shall not exceed 175,000 tons per 12 consecutive month period.
- The PM emissions from each furnace at this source shall not exceed 1.78 pounds per ton of metal melted.
- The PM-10 emissions from each furnace at this source shall not exceed 1.78 pounds per ton of metal melted.

- (d) The uncontrolled PM emissions from the chip dryer shall not exceed 2.28 pounds per ton of aluminum chips.
- (e) The uncontrolled PM10 emissions from the chip dryer shall not exceed 2.28 pounds per ton of aluminum chips.
- (f) The uncontrolled VOC emissions from the chip dryer shall not exceed 2.0 pounds per ton of aluminum chips.
- (g) The PM emissions from the baghouse controlling the crusher shall not exceed 0.235 pounds per hour.
- (h) The PM10 emissions from the baghouse controlling the crusher shall not exceed 0.235 pounds per hour.
- (i) The amount of organic flux used in all of the furnaces combined shall not exceed 39,184 pounds per 12 consecutive month period, where 100 pounds of inorganic flux is equivalent to 1 pound of organic flux.
- (j) The HCl emissions from the use of organic flux shall not exceed 0.49 pounds per pound of organic flux used.
- (k) The HF emissions from the use of organic flux shall not exceed 0.009 pounds per pound of organic flux used.
- (l) The hexachloroethane emissions from the use of organic flux shall not exceed 0.41 pounds per pound of organic flux used.
- (m) The HCl emissions from the use of inorganic flux shall not exceed 0.005 pounds per pound of inorganic flux used.
- (n) The HF emissions from the use of inorganic flux shall not exceed 0.004 pounds per pound of inorganic flux used.
- (o) The Permittee shall not melt any post-consumer scrap materials in any of the furnaces at this source. Only in-house returns and/or in-house returns from other sources where the composition of the purchased returns have at least the same quality as the source's own in-house returns shall be melted in any of the furnaces. The other source's returns shall be specified contractually, and the quality of the returns shall be controlled contractually. Therefore, this source is not considered a secondary metal production facility and is therefore, not one of the 28 listed source categories.

These conditions are sufficient to limit emissions of each criteria pollutant to less than 250 tons per year. Compliance with these conditions will make this source a minor PSD source and render the requirements of PSD not applicable. These conditions are also sufficient to limit emissions of HAPs to less than 10 tons per year for any single HAP and less than 25 tons per year for all HAPs combined.

326 IAC 8-1-6 (BACT)

This rule applies to facilities constructed after January 1, 1980 which have the potential to emit VOC equal to or greater than 25 tons per year.

- (a) None of the proposed new furnaces are subject to the requirements of this rule because each furnace has the potential to emit less than 25 tons per year of VOC.

- (b) The chip dryer is not subject to the requirements of this rule because it was constructed in 1974, which is prior to the applicability date of this rule, January 1, 1980.
- (c) None of the existing furnaces have the potential to emit 25 tons per year or more of VOC; therefore none of the existing furnaces are subject to the requirements of this rule. Additionally, the furnaces identified as INDUCT-21, INDUCT-22, RF-3, RF-9, RF-11, RF-16, RF-2, RF-5, RF-7, RF-17, and RF-19 were each constructed prior to the applicability date of this rule, January 1, 1980.
- (d) The natural gas-fired boiler referred to as the POWER tool room boiler is not subject to the requirements of this rule because it was constructed prior to the applicability date of this rule, January 1, 1980, and has the potential to emit less than 25 tons per year of VOC.
- (e) The scrap metal crusher referred to as CRUSH is not subject to the requirements of this rule because it was constructed prior to the applicability date of this rule, January 1, 1980, and has the potential to emit less than 25 tons per year of VOC.
- (f) The maintenance painting process is not subject to the requirements of this rule because it has the potential to emit less than 25 tons per year of VOC.

326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating)

Pursuant to this rule, the PM emissions from the tool room boiler shall not exceed 0.8 pound per million Btu of heat input. This limitation is based on the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

where C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

Pt = Pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).

Q = Total source maximum operating capacity rating in million Btu per hour of heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's operation permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBtu/hr heat input. The value 0.8 shall be used for Q greater than 1,000 MMBtu/hr heat input.

h = Stack height in feet. If a number of stacks of different heights exist, the average stack height to represent "N" stacks shall be calculated by weighing each stack height with its particulate matter emissions rate.

Using the equation, Pt = 3.88 lb/MMBtu; therefore, pursuant to 326 IAC 6-2-3(e), the limit defaults to 0.8 lb/MMBtu of heat input.

Based on calculations, the boiler is in compliance with this requirement.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) Visible emissions notations of the scrap metal crusher baghouse stack exhaust and the chip dryer stack exhaust shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) The Permittee shall record the total static pressure drop across the baghouse controlling the scrap metal crusher at least once per shift when the scrap metal crusher is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 to 9.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (c) Records shall be kept of the amount of metal melted in all furnaces combined, each month of operation. Quarterly reports of this information shall be submitted to OAQ using the forms included with the permit.
- (d) Records shall be kept of the amount of organic and inorganic flux used in all furnaces combined, each month of operation. Quarterly reports of this information shall be

submitted to OAQ using the forms included with the permit.

- (e) An inspection shall be performed each calendar quarter of all bags controlling the scrap metal crusher. All defective bags shall be replaced.
- (f) In the event that bag failure has been observed.
 - (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C -Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
 - (2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (g) The source shall comply with all monitoring requirements pursuant to 40 CFR 63, Subpart RRR, as stated under the Federal Rule Applicability section of this document.

These monitoring conditions are necessary because the control devices must operate properly to ensure compliance with 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 6-3 (Process Operations), 326 IAC 5-1 (Opacity), and 326 IAC 2-7 (Part 70).

Stack Testing Requirements

In addition to the stack tests required by the NESHAP 40 CFR 63, Subpart RRR, the Permittee shall perform stack tests as shown in the table below using methods as approved by the Commissioner. PM-10 includes filterable and condensable PM-10.

| Facilities to be tested | Pollutants for which to test | Testing Schedule |
|---|---|---|
| dry hearth furnace #10 | PM and PM10 | Within 60 days after achieving maximum capacity, but no later than 180 days after startup |
| reverberatory furnace #2 | PM and PM10 | Within 12 months after issuance of this permit |
| reverberatory furnace #6C | PM and PM10 | Within 12 months after issuance of this permit |
| one of the electric induction furnaces (#21, 22, 23, 24, 26, or 27) | PM and PM10 (<u>uncontrolled</u> emissions) | Within 12 months after issuance of this permit |
| aluminum chip dryer | PM, PM10, and VOC (<u>uncontrolled</u> emissions) | Within 12 months after issuance of this permit |
| scrap metal crusher | PM and PM10 (controlled emissions) | Within 12 months after issuance of this permit |

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 093-13639-00007.

General Motors Corporation - GMPTG - Bedford
Permit #093-13639-00007

Potential Emissions

Source Name: General Motors Corporation
Source Address: 105 GM Drive, Bedford, Indiana 47421
Permit Number: 093-13639-00007
Permit Reviewer: Nisha Sizemore

| Furnaces | Max Capacity (tons metal/hr) | Max Capacity (MMBtu/hr) |
|-------------------------------|---|------------------------------------|
| #10 dry hearth | 12.5 | 50 |
| small dry hearth #13 | 2.08 | 10 |
| small dry hearth #14 | 2.08 | 10 |
| #18A reverb | 2 | 7 |
| Ind #21 | 3.3 | |
| Ind #22 | 3.3 | |
| Ind #23 | 3.3 | |
| Ind #24 | 3.3 | |
| Ind #26 | 3.3 | |
| Ind #27 | 3.3 | |
| DC#3 | 3.4 | 20.4 |
| DC#11 | 5.1 | 20.4 |
| DC#12 | 10 | 40 |
| DC#16 | 4.87 | 29.2 |
| DC#2 | 6.25 | 25 |
| Pist #5 | 4.17 | 25 |
| Pist #6-C | 5 | 33 |
| Pist #7 | 6.6 | 39.6 |
| Pist #13 | 1.08 | 5.2 |
| Pist #17 | 4.3 | 25.8 |
| Pist #19 | 4.67 | 28 |
| Total Furnace Capacity | 93.9 | 368.6 |

General Motors Corporation - GMPTG - Bedford
Permit #093-13639-00007

Potential Emissions

| Emission Unit | Melt Capacity (tons metal/hr) | Heat Capacity (MMBtu/hr) | Pollutant | EF (lb/ton metal) | EF (lb/MMCF) | Emissions before Controls (tons/yr) | Emissions after Controls (tons/yr) | Control Device | Control Efficiency (%) |
|---------------|----------------------------------|-----------------------------|-----------|----------------------|-----------------|--|---|-------------------|------------------------------|
| all furnaces | 93.9 | 368.6 | PM | 1.78 | | 732.08 | | | |
| | | | PM10 | 1.78 | | 732.08 | | | |
| | | | SO2 | | 0.6 | 0.97 | | | |
| | | | NOx | | 100 | 161.45 | | | |
| | | | VOC | 0.2 | 5.5 | 91.14 | | | |
| | | | CO | | 84 | 135.62 | | | |

| Emission Unit | Organic Flux Usage C2(CI3)2 (lbs/yr) | Inorganic Flux Usage SF6 (lbs/yr) | Pollutant | EF (lb/ton CI) | EF (lb/ton CI) | Emissions before Controls (tons/yr) | Emissions after Controls (tons/yr) | Control Device | Control Efficiency (%) |
|--------------------|---|--|------------------|------------------------|--------------------------|--|---|-------------------|------------------------------|
| Furnace flux usage | 70,000 | 1,312,500 | | | | | | | |
| CI usage (lb/yr) | 62897 | | | | | | | | |
| | | | | EF (lb/lb org flux) | EF (lb/lb inorg flux) | | | | |
| | | | HCl | 0.55 | 0.005 | 22.53 | 22.53 | | |
| | | | HF | 0.009 | 0.004 | 2.94 | 2.94 | none | |
| | | | hexachloroethane | 0.41 | | 14.35 | 14.35 | none | |
| | | | Total HAPs | | | 39.82 | 39.82 | | |

Note: The stack test results for organic flux demonstrated an emission factor of 0.49 lb/lb organic flux used.

General Motors Corporation - GMPTG - Bedford
Permit #093-13639-00007

Potential Emissions

| Emission Unit | Capacity (tons metal/hr) | Heat Capacity (MMBtu/hr) | Pollutant | EF (lb/ton metal) | EF (lb/MMCF) | Emissions before Controls (tons/yr) | Emissions after Controls (tons/yr) | Control Device | Control Efficiency (%) |
|---------------|-----------------------------|-----------------------------|-----------|----------------------|-----------------|--|---|-------------------|------------------------------|
| chip dryer | 5.85 | 6.83 | PM | 2.28 | | 58.42 | | | |
| | | | PM10 | 2.28 | | 58.42 | | | |
| | | | SO2 | | 0.6 | 0.02 | | | |
| | | | NOx | | 100 | 2.99 | | | |
| | | | VOC | 2 | 5.5 | 51.41 | | | |
| | | | CO | | 84 | 2.51 | | | |

| Emission Unit | Capacity (tons metal/hr) | Flow Rate (acfm) | Pollutant | Baghouse Outlet Grain Loading (gr/acfm) | EF (lb/MMCF) | Emissions before Controls (tons/yr) | Emissions after Controls (tons/yr) | Control Device | Control Efficiency (%) |
|---------------------|-----------------------------|---------------------|-----------|--|-----------------|--|---|-------------------|------------------------------|
| scrap metal crusher | 175000 | 12000 | PM | 0.01 | | 102.8571 | 1.03 | | 99% |
| | | | PM10 | 0.01 | | 102.8571 | 1.03 | | |
| | | | SO2 | | | | 0.00 | | |
| | | | NOx | | | | 0.00 | | |
| | | | VOC | | | | 0.00 | | |
| | | | CO | | | | 0.00 | | |

General Motors Corporation - GMPTG - Bedford
Permit #093-13639-00007

Potential Emissions

Maintenance painting:

VOC emissions: 2.74 tons/yr

Tool Room Boiler: (see natural gas combustion spreadsheet for detailed calculations)

| | | | | | | |
|-----|------|-----|-----|-----|-----|---------|
| PM | PM10 | SO2 | NOx | VOC | CO | HAPs |
| 0.3 | 0.3 | 0.0 | 4.4 | 0.2 | 3.7 | 0.08307 |

Total Potential Emissions

| | |
|-------------------|--------------|
| | tons/yr |
| PM | 893.66 |
| PM10 | 893.66 |
| SO2 | 0.99 |
| NOx | 168.84 |
| VOC | 142.75 |
| CO | 141.83 |
| HCl | 22.53 |
| HF | 2.94 |
| hexachloroethane | 14.35 |
| HAPs from n.g. | 3.19 |
| Total HAPs | 43.01 |

General Motors Corporation - GMPTG - Bedford
Permit #093-13639-00007

Limited Emissions

Source Name: General Motors Corporation
Source Address: 105 GM Drive, Bedford, Indiana 47421
Permit Number: 093-13639-00007
Permit Reviewer: Nisha Sizemore

| Furnaces | Max Capacity (tons metal/hr) | Max Capacity (MMBtu/hr) | Max Capacity of inorganic flux (lb/ton metal) | Max Capacity of organic flux (lb/ton metal) |
|-------------------------------|---------------------------------|----------------------------|---|---|
| #10 dry hearth | 12.5 | 50 | 0 | 0 |
| small dry hearth #13 | 2.08 | 10 | 0 | 0 |
| small dry hearth #14 | 2.08 | 10 | 0 | 0 |
| #18A reverb | 2 | 7 | 0 | 0 |
| Ind #21 | 3.3 | | 0 | 0 |
| Ind #22 | 3.3 | | 0 | 0 |
| Ind #23 | 3.3 | | 0 | 0 |
| Ind #24 | 3.3 | | 0 | 0 |
| Ind #26 | 3.3 | | 0 | 0 |
| Ind #27 | 3.3 | | 0 | 0 |
| DC#3 | 3.4 | 20.4 | 7 | 0 |
| DC#11 | 5.1 | 20.4 | 7 | 0 |
| DC#12 | 10 | 40 | 7 | 0 |
| DC#16 | 4.87 | 29.2 | 7 | 0 |
| DC#2 | 6.25 | 25 | 0.1 | 0 |
| Pist #5 | 4.17 | 25 | 9 | 2 |
| Pist #6-C | 5 | 33 | 0.1 | 0 |
| Pist #7 | 6.6 | 39.6 | 9 | 2 |
| Pist #13 | 1.08 | 5.2 | 0 | 0 |
| Pist #17 | 4.3 | 25.8 | 9 | 2 |
| Pist #19 | 4.67 | 28 | 9 | 2 |
| Total Furnace Capacity | 93.9 | 368.6 | 64.2 | 8 |

General Motors Corporation - GMPTG - Bedford
Permit #093-13639-00007

Limited Emissions

| Emission Unit | Melt Limit (tons metal/yr) | Heat Capacity (MMBtu/hr) | Pollutant | EF (lb/ton metal) | EF (lb/MMCF) | Emissions before Controls (tons/yr) | Emissions after Controls (tons/yr) | Control Device | Control Efficiency (%) |
|---------------|-------------------------------|-----------------------------|-----------|----------------------|-----------------|--|---|-------------------|------------------------------|
| all furnaces | 175000 | 368.6 | PM | 1.78 | | 155.75 | 155.75 | none | |
| | | | PM10 | 1.78 | | 155.75 | 155.75 | none | |
| | | | SO2 | | 0.6 | 0.97 | 0.97 | none | |
| | | | NOx | | 100 | 161.45 | 161.45 | none | |
| | | | VOC | 0.2 | 5.5 | 26.38 | 26.38 | none | |
| | | | CO | | 84 | 135.62 | 135.62 | none | |

| Emission Unit | Organic Flux Usage C2(CI3)2 (lbs/yr) | Inorganic Flux Usage SF6 (lbs/yr) | Pollutant | EF (lb/lb org flux) | EF (lb/lb inorg flux) | Emissions before Controls (tons/yr) | Emissions after Controls (tons/yr) | Control Device | Control Efficiency (%) |
|--------------------|---|--|------------------|--------------------------------|--------------------------|--|---|-------------------|------------------------------|
| Furnace flux usage | 34,909 | | | | | | | | |
| CI usage (lb/yr) | 31367 | | | | | | | | |
| | | | PM | included in above calculations | | | | none | |
| | | | PM10 | included in above calculations | | | | none | |
| | | | HCl | 0.55 | 0.005 | 9.60 | 9.60 | none | |
| | | | HF | 0.009 | 0.004 | 0.16 | 0.16 | none | |
| | | | hexachloroethane | 0.41 | | 7.16 | 7.16 | none | |
| | | | Total HAPs | | | 16.91 | 16.91 | | |

Note: The stack test results for organic flux demonstrated an emission factor of 0.49 lb/lb organic flux used.

The applicant has requested to use an emission factor of 0.55 lb/lb organic flux in order to provide some margin of error in the emission limit.

General Motors Corporation - GMPTG - Bedford
Permit #093-13639-00007

Limited Emissions

| Emission Unit | Capacity (tons metal/yr) | Heat Capacity (MMBtu/hr) | Pollutant | EF (lb/ton metal) | EF (lb/MMCF) | Emissions before Controls (tons/yr) | Emissions after Controls (tons/yr) | Control Device | Control Efficiency (%) |
|---------------|-----------------------------|-----------------------------|-----------|----------------------|-----------------|--|---|-------------------|------------------------------|
| chip dryer | 51246 | 6.83 | PM | 2.28 | | 58.42 | 58.42 | baghouse | |
| | | | PM10 | 2.28 | | 58.42 | 58.42 | baghouse | |
| | | | SO2 | | 0.6 | 0.02 | 0.02 | | |
| | | | NOx | | 100 | 2.99 | 2.99 | | |
| | | | VOC | 2 | 5.5 | 51.41 | 51.41 | afterburner | |
| | | | CO | | 84 | 2.51 | 2.51 | | |

| Emission Unit | Capacity (tons metal/hr) | Flow Rate (acfm) | Pollutant | Baghouse Outlet Grain Loading (gr/acfm) | EF (lb/MMCF) | Emissions before Controls (tons/yr) | Emissions after Controls (tons/yr) | Control Device | Control Efficiency (%) |
|---------------------|-----------------------------|---------------------|-----------|--|-----------------|--|---|-------------------|------------------------------|
| scrap metal crusher | 175000 | 12000 | PM | 0.01 | | 103 | 1.03 | baghouse | 99% |
| | | | PM10 | 0.01 | | 103 | 1.03 | | |
| | | | SO2 | | | 0.00 | | | |
| | | | NOx | | | 0.00 | | | |
| | | | VOC | | | 0.00 | | | |
| | | | CO | | | 0.00 | | | |

General Motors Corporation - GMPTG - Bedford
Permit #093-13639-00007

Limited Emissions

Maintenance painting:

VOC emissions: 2.74 tons/yr

Tool Room Boiler: (see natural gas combustion spreadsheet for detailed calculations)

| | | | | | | |
|-----|------|-----|-----|-----|-----|---------|
| PM | PM10 | SO2 | NOx | VOC | CO | HAPs |
| 0.3 | 0.3 | 0.0 | 4.4 | 0.2 | 3.7 | 0.08307 |

Total Limited Emissions

| | | |
|-------------------|--------------|--|
| | tons/yr | |
| PM | 215.50 | |
| PM10 | 215.50 | |
| SO2 | 0.99 | |
| NOx | 168.84 | |
| VOC | 80.73 | |
| CO | 141.83 | |
| HCl | 9.60 | |
| HF | 0.16 | |
| hexachloroethane | 7.16 | |
| HAPs from n.g. | 3.19 | (see natural gas combustion spreadsheet for detailed calculations) |
| <u>Total HAPs</u> | <u>20.10</u> | |

Company Name: General Motors Corporation
Address, City IN Zip: 105 GM Drive, Bedford, Indiana 47421
Permit #: 093-13639
Plt ID: 093-00007
Reviewer: Nisha Sizemore

The following limits are pursuant to the requirements of 326 IAC 6-3-2 (Process Operations).
These limits are based on the equations given in the rule.

| Facility | PWR (tons/hr) | Limit (lbs/hr) | Limit (tons/yr) | |
|-----------------------|------------------|-------------------|--------------------|--|
| aluminum chip dryer | 5.85 | 13.39 | 58.65 | |
| scrap metal crusher | 37.5 | 41.94 | 183.71 | |
| induction furnaces | 3.3 | 9.12 | 39.96 | (limit applies to each individual furnace) |
| reverb furnace 2 | 6.25 | 14.00 | 61.31 | |
| reverb furnace 3 | 3.4 | 9.31 | 40.77 | |
| reverb furnace 11 | 5.1 | 12.21 | 53.50 | |
| reverb furnace 16 | 4.87 | 11.84 | 51.87 | |
| reverb furnace 12 | 10 | 19.18 | 84.00 | |
| reverb furnace 13 | 1.08 | 4.32 | 18.91 | |
| reverb furnace 5 | 4.17 | 10.67 | 46.75 | |
| reverb furnace 6C | 5 | 12.05 | 52.79 | |
| reverb furnace 7 | 6.6 | 14.52 | 63.58 | |
| reverb furnace 17 | 4.3 | 10.89 | 47.72 | |
| reverb furnace 18A | 2 | 6.52 | 28.57 | |
| reverb furnace 19 | 4.67 | 11.51 | 50.43 | |
| dry hearth furnace 13 | 2.08 | 6.70 | 29.33 | |
| dry hearth furnace 14 | 2.08 | 6.70 | 29.33 | |
| dry hearth furnace 10 | 12.5 | 22.27 | 97.54 | |

| Facility | PWR (tons/hr) | EF (lb PM/ton) | Emissions before control (lb/hr) | Control Device | Control Eff (%) | Emissions after control (lb/hr) | Limit (lbs/hr) |
|-----------------------|------------------|-------------------|--|-------------------|--------------------|---------------------------------------|-------------------|
| aluminum chip dryer | 5.85 | 2.28 | 13.34 | baghouse | 85.0% | 2.00 | 13.39 |
| scrap metal crusher | 37.50 | | 46.97 | baghouse | 99.5% | 0.23 | 41.94 |
| induction furnaces | 3.30 | 1.78 | 5.87 | venturi scrubber | 85.0% | 0.88 | 9.12 |
| reverb furnace 2 | 6.25 | 1.78 | 11.13 | none | | 11.13 | 14.00 |
| reverb furnace 3 | 3.40 | 1.78 | 6.05 | none | | 6.05 | 9.31 |
| reverb furnace 11 | 5.10 | 1.78 | 9.08 | none | | 9.08 | 12.21 |
| reverb furnace 16 | 4.87 | 1.78 | 8.67 | none | | 8.67 | 11.84 |
| reverb furnace 12 | 10.00 | 1.78 | 17.80 | none | | 17.80 | 19.18 |
| reverb furnace 13 | 1.08 | 1.78 | 1.92 | none | | 1.92 | 4.32 |
| reverb furnace 5 | 4.17 | 1.78 | 7.42 | none | | 7.42 | 10.67 |
| reverb furnace 6C | 5.00 | 1.78 | 8.90 | none | | 8.90 | 12.05 |
| reverb furnace 7 | 6.60 | 1.78 | 11.75 | none | | 11.75 | 14.52 |
| reverb furnace 17 | 4.30 | 1.78 | 7.65 | none | | 7.65 | 10.89 |
| reverb furnace 18A | 2.00 | 1.78 | 3.56 | none | | 3.56 | 6.52 |
| reverb furnace 19 | 4.67 | 1.78 | 8.31 | none | | 8.31 | 11.51 |
| dry hearth furnace 13 | 2.08 | 1.78 | 3.70 | none | | 3.70 | 6.70 |
| dry hearth furnace 14 | 2.08 | 1.78 | 3.70 | none | | 3.70 | 6.70 |
| dry hearth furnace 10 | 12.50 | 1.78 | 22.25 | none | | 22.25 | 22.27 |

The 1.78 lb/ton is an alternate emission factor. A similar source (Ft Wayne Foundry) tested at less than 1 lb/ton.

#10 dry hearth furnace
 #18 reverb furnace
 2 small dry hearth furnaces

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: General Motors Corporation - GMPTG - Bedford
 Plant Location: 105 GM Drive, Bedford, IN 47421
 County: Lawrence
 Permit Reviewer: Nisha Sizemore
 Permit #: 093-13639
 Plt. ID #: 093-00007

Heat Input Capacity
 MMBtu/hr

Potential Throughput
 MMCF/yr

77.0

674.5

| | Pollutant | | | | | |
|-------------------------------|-----------|------|-----|------------|-----|-------|
| | PM | PM10 | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 7.6 | 7.6 | 0.6 | 100.0 | 5.5 | 84.0 |
| | | | | *see below | | |
| Potential Emission in tons/yr | 2.6 | 2.6 | 0.2 | 33.7 | 1.9 | 28.33 |

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

HAPs Emissions

Company Name: General Motors Corporation - GMPTG - Bedford

Plant Location: 105 GM Drive, Bedford, IN 47421

County: Lawrence

Permit Reviewer: Nisha Sizemore

Permit #: 093-13639

Plt. ID #: 093-00007

HAPs - Organics

| | | | | | |
|-------------------------------|--------------------|----------------------------|-------------------------|-------------------|--------------------|
| Emission Factor in lb/MMcf | Benzene 2.1E-03 | Dichlorobenzene 1.2E-03 | Formaldehyde 7.5E-02 | Hexane 1.8E+00 | Toluene 3.4E-03 |
| Potential Emission in tons/yr | 7.082E-04 | 4.047E-04 | 2.529E-02 | 6.071E-01 | 1.147E-03 |

HAPs - Metals

| | | | | | |
|-------------------------------|-----------------|--------------------|---------------------|----------------------|-------------------|
| Emission Factor in lb/MMcf | Lead 5.0E-04 | Cadmium 1.1E-03 | Chromium 1.4E-03 | Manganese 3.8E-04 | Nickel 2.1E-03 |
| Potential Emission in tons/yr | 1.686E-04 | 3.710E-04 | 4.722E-04 | 1.282E-04 | 7.082E-04 |

Total HAPs: 0.63647 tons/yr

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

all furnaces, chip dryer
and tool room boiler

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: General Motors Corporation - GMPTG - Bedford
Plant Location: 105 GM Drive, Bedford, IN 47421
County: Lawrence
Permit Reviewer: Nisha Sizemore
Permit #: 093-13639
Plt. ID #: 093-00007

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

385.5

3377.2

| Emission Factor in lb/MMCF | Pollutant | | | | | |
|-------------------------------|-----------|------|-----|------------|-----|--------|
| | PM | PM10 | SO2 | NOx | VOC | CO |
| | 7.6 | 7.6 | 0.6 | 100.0 | 5.5 | 84.0 |
| | | | | *see below | | |
| Potential Emission in tons/yr | 12.8 | 12.8 | 1.0 | 168.9 | 9.3 | 141.84 |

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
(SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

HAPs Emissions

Company Name: General Motors Corporation - GMPTG - Bedford

Plant Location: 105 GM Drive, Bedford, IN 47421

County: Lawrence

Permit Reviewer: Nisha Sizemore

Permit #: 093-13639

Plt. ID #: 093-00007

HAPs - Organics

| | | | | | |
|-------------------------------|--------------------|----------------------------|-------------------------|-------------------|--------------------|
| Emission Factor in lb/MMcf | Benzene 2.1E-03 | Dichlorobenzene 1.2E-03 | Formaldehyde 7.5E-02 | Hexane 1.8E+00 | Toluene 3.4E-03 |
| Potential Emission in tons/yr | 3.546E-03 | 2.026E-03 | 1.266E-01 | 3.040E+00 | 5.741E-03 |

HAPs - Metals

| | | | | | |
|-------------------------------|-----------------|--------------------|---------------------|----------------------|-------------------|
| Emission Factor in lb/MMcf | Lead 5.0E-04 | Cadmium 1.1E-03 | Chromium 1.4E-03 | Manganese 3.8E-04 | Nickel 2.1E-03 |
| Potential Emission in tons/yr | 8.443E-04 | 1.857E-03 | 2.364E-03 | 6.417E-04 | 3.546E-03 |

Total HAPs: 3.18673 tons/yr

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Tool Room Boiler**Appendix A: Emissions Calculations****Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler**

Company Name: General Motors Corporation
Address, City IN Zip: 105 GM Drive, Bedford, Indiana 47421
Permit #: 093-13639
Plt ID: 093-00007
Reviewer: Nisha Sizemore

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

10.1

88.0

| Emission Factor in lb/MMCF | Pollutant | | | | | |
|-------------------------------|-----------|------|-----|------------|-----|------|
| | PM | PM10 | SO2 | NOx | VOC | CO |
| | 7.6 | 7.6 | 0.6 | 100.0 | 5.5 | 84.0 |
| | | | | *see below | | |
| Potential Emission in tons/yr | 0.3 | 0.3 | 0.0 | 4.4 | 0.2 | 3.7 |

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

HAPs Emissions

Company Name: General Motors Corporation

Address City IN Zip: 105 GM Drive, Bedford, Indiana 47421

CP: 093-13639

Plt ID: 093-00007

Reviewer: Nisha Sizemore

HAPs - Organics

| | | | | | |
|-------------------------------|--------------------|----------------------------|-------------------------|-------------------|--------------------|
| Emission Factor in lb/MMcf | Benzene 2.1E-03 | Dichlorobenzene 1.2E-03 | Formaldehyde 7.5E-02 | Hexane 1.8E+00 | Toluene 3.4E-03 |
| Potential Emission in tons/yr | 9.244E-05 | 5.282E-05 | 3.301E-03 | 7.923E-02 | 1.497E-04 |

HAPs - Metals

| | | | | | |
|-------------------------------|-----------------|--------------------|---------------------|----------------------|-------------------|
| Emission Factor in lb/MMcf | Lead 5.0E-04 | Cadmium 1.1E-03 | Chromium 1.4E-03 | Manganese 3.8E-04 | Nickel 2.1E-03 |
| Potential Emission in tons/yr | 2.201E-05 | 4.842E-05 | 6.163E-05 | 1.673E-05 | 9.244E-05 |

Total HAPs: 0.08307 tons/yr

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Company Name: General Motors Corporation
Address, City IN Zip: 105 GM Drive, Bedford, Indiana 47421
Permit #: 093-13639
Plt ID: 093-00007
Reviewer: Nisha Sizemore

Tool room boiler

boiler installed in 1966

Limit pursuant to 326 IAC 6-2-3

$$Pt = (C X a X h) / (76.5 X (Q^{0.75}) X (N^{0.25}))$$

C = 50 micrograms per cubic meter
Q = 10.05 total heat input capacity (MMBtu/hr)
N = 1 number of stacks
a = 0.67 plume rise factor
h = 50 ft --- stack height

Pt = 3.88 lb/MMBtu heat input

therefore, pursuant to 326 IAC 6-2-3 (e), the limit defaults to 0.8 lb/MMBtu of heat input

$$0.8 \text{ lb/MMBtu} \times 10.05 \text{ MMBtu/hr} = 8.04 \text{ lbs/hr} = 35.22 \text{ tons/yr}$$

GM POWERTRAIN GROUP - BEDFORD, INDIANA

| | | |
|--|---|--|
| | TABLE 2 POTENTIALS TO EMIT and ALLOWABLE EMISSIONS No. 10 DRY HEARTH FURNACE, No. 18 REVERB FURNACE, & SMALL DRY HEARTH FURNACES (2) | |
|--|---|--|

CAPACITY

| Activity | SCC Code | Rated Capacity | Units | Maximum Capacity | Units |
|--------------------------------------|----------|----------------|----------|------------------|--------|
| No. 10 Dry Hearth: Melting | 30400301 | 12.5 | TM/Hr | 109,500 | TM/Yr |
| No. 10 Dry Hearth: Natural Gas | 10300602 | 50.0 | MMBtu/hr | 0.050 | MMc/yr |
| Small Dry Hearth: Melting (each) | 30400301 | 2.08 | TM/Hr | 18,221 | TM/Yr |
| Small Dry Hearth: Natural Gas (each) | 10300602 | 10.0 | MMBtu/hr | 0.010 | MMc/yr |
| No. 18 Reverb: Melting | 30400301 | 2.0 | TM/Hr | 17,520 | TM/Yr |
| No. 18 Reverb: Natural Gas | 10300602 | 7.0 | MMBtu/hr | 0.007 | MMc/yr |

POTENTIALS TO EMIT

| No. 10 Dry Hearth Furnace: Melting | | | | |
|---|-----------------|---------|------------|-------------|
| Criteria Pollutant | Emission Factor | Units | (lbs/hr) | (tons/yr) |
| PM | 1.78 | lbs/TMC | 22.25 | 97.46 |
| PM10 | 1.78 | lbs/TMC | 22.25 | 97.46 |
| SO2 | 0.00 | lbs/TMC | 0.00 | 0.00 |
| NOx | 0.00 | lbs/TMC | 0.00 | 0.00 |
| VOC | 0.00 | lbs/TMC | 0.00 | 0.00 |
| CO | 0.00 | lbs/TMC | 0.00 | 0.00 |

EF Source: AP-42: Alternate EF established for PM and PM10.

| ALLOWABLE EMISSIONS vs. POTENTIAL TO EMIT | | | | |
|--|----------------|-------|---------------------|---------|
| Activity | Rated Capacity | Units | Emission Factor: PM | Units |
| No. 10 Dry Hearth Furnace | 12.5 | TM/Hr | 1.78 | lbs/TMC |
| Small Dry Hearth Furnace (each) | 2.08 | TM/Hr | 1.78 | lbs/TMC |
| No. 18 Reverb Furnace | 2.0 | TM/Hr | 1.78 | lbs/TMC |

Allowable Emissions by 326 IAC 6-3: lbs PM/hr = 4.10 x (tons/hr process rate) ^{0.67}

| No. 10 Dry Hearth Furnace: Natural Gas Combustion | | | | |
|--|-----------------|----------|------------|-------------|
| Criteria Pollutant | Emission Factor | Units | (lbs/hr) | (tons/yr) |
| PM | See Note | lbs/MMcf | See Note | See Note |
| PM10 | See Note | lbs/MMcf | See Note | See Note |
| SO2 | 0.6 | lbs/MMcf | 0.03 | 0.13 |
| NOx | 100.0 | lbs/MMcf | 5.00 | 21.90 |
| VOC | 5.5 | lbs/MMcf | 0.28 | 1.20 |
| CO | 84.0 | lbs/MMcf | 4.20 | 18.40 |

EF source: AP-42 natural gas combustion

Note: Particulate emissions due to combustion are included within the 1.78 lb/ton melt

| Small Dry Hearth Furnace: Melting (each) | | | | |
|---|-----------------|---------|------------|-------------|
| Criteria Pollutant | Emission Factor | Units | (lbs/hr) | (tons/yr) |
| PM | 1.78 | lbs/TMC | 3.70 | 16.22 |
| PM10 | 1.78 | lbs/TMC | 3.70 | 16.22 |
| SO2 | 0.00 | lbs/TMC | 0.00 | 0.00 |
| NOx | 0.00 | lbs/TMC | 0.00 | 0.00 |
| VOC | 0.00 | lbs/TMC | 0.00 | 0.00 |
| CO | 0.00 | lbs/TMC | 0.00 | 0.00 |

EF Source: AP-42: Alternate EF established for PM and PM10.

| Small Dry Hearth Furnace: Natural Gas Combustion (each) | | | | |
|--|-----------------|----------|------------|-------------|
| Criteria Pollutant | Emission Factor | Units | (lbs/hr) | (tons/yr) |
| PM | See Note | lbs/MMcf | See Note | See Note |
| PM10 | See Note | lbs/MMcf | See Note | See Note |
| SO2 | 0.6 | lbs/MMcf | 0.01 | 0.03 |
| NOx | 100.0 | lbs/MMcf | 1.00 | 4.38 |
| VOC | 5.5 | lbs/MMcf | 0.06 | 0.24 |
| CO | 84.0 | lbs/MMcf | 0.84 | 3.68 |

EF source: AP-42 natural gas combustion

Note: Particulate emissions due to combustion are included within the 1.78 lb/ton melt emission factor.

| No. 18A Reverb Furnace: Melting | | | | |
|--|-----------------|---------|------------|-------------|
| Criteria Pollutant | Emission Factor | Units | (lbs/hr) | (tons/yr) |
| PM | 1.78 | lbs/TMC | 3.56 | 15.59 |
| PM10 | 1.78 | lbs/TMC | 3.56 | 15.59 |
| SO2 | 0.00 | lbs/TMC | 0.00 | 0.00 |
| NOx | 0.00 | lbs/TMC | 0.00 | 0.00 |
| VOC | 0.00 | lbs/TMC | 0.00 | 0.00 |
| CO | 0.00 | lbs/TMC | 0.00 | 0.00 |

EF Source: AP-42: Alternate EF established for PM and PM10.

| No. 18A Reverb Furnace: Natural Gas Combustion | | | | |
|---|-----------------|----------|------------|-------------|
| Criteria Pollutant | Emission Factor | Units | (lbs/hr) | (tons/yr) |
| PM | See Note | lbs/MMcf | See Note | See Note |
| PM10 | See Note | lbs/MMcf | See Note | See Note |
| SO2 | 0.6 | lbs/MMcf | 0.00 | 0.02 |
| NOx | 100.0 | lbs/MMcf | 0.70 | 21.90 |
| VOC | 5.5 | lbs/MMcf | 0.04 | 1.20 |
| CO | 84.0 | lbs/MMcf | 0.59 | 18.40 |

EF source: AP-42 natural gas combustion

| Totals | | |
|--------------------|------------|-------------|
| Criteria Pollutant | (lbs/hr) | (tons/yr) |
| PM | 33.21 | 145.48 |
| PM10 | 33.21 | 145.48 |
| SO2 | 0.046 | 0.20 |
| NOx | 7.7 | 52.56 |
| VOC | 0.42 | 2.89 |
| CO | 6.47 | 44.15 |